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EDUCATION

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MOTIVATION VERSUS "CONTROL" IN REMEDIAL READING[1]

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FRESH motivation through the changing of the set of mind or the intention of the learner is a more important factor in *remedial reading* than the particular methods and materials of instruction. This is our trial thesis and I believe it holds especially true in the upper grade and secondary school levels where often after long unsuccessful efforts, there is an acceptance of the *status quo* of mediocrity or failure. Methods which are intrinsically not even sound or sane may, because of the novelty of their appeal and their assurance of success, arouse the student to new hopes and efforts at improvement. Thus Herbert Moore's manual of reading and study aids, which certainly includes (along with better things) some bizarre methods and questionable inducements to learning, is able to report improvement "over a three months' period of from 30% to 65% in vocabulary and 25% to 75% in getting central meaning," but, as he remarks, much the more important and by far the most valuable indication of the success of his technique is a "change in attitude toward work from one of despair to one of frankly facing a difficulty and finding a way out, and a gradual growth of the conviction that difficulties and weaknesses are not so much due to native inabilities as to inadequate technique or background."[2] It is my considered opinion that some of the techniques (which I shall review and illustrate shortly and which I cannot but regard as essentially reprehensible in themselves) by producing this change of attitude are in good measure responsible for the associated improvement in vocabulary and awareness of central meanings.

We need but remind you of the changes which objective experimentation has produced in recent years on our notions of the relative importance of the laws of learning. The much-vaunted law of exercise which served to justify the tedious *drills* of the schools has been relegated to a position of innocuous desuetude. Exer-

1 These informal remarks were made in connection with the showing of pictures of the eye-movements of subjects who had employed the Moore, Pressy and similar manuals for improving their habits of reading and as preliminary to the showing of certain new motion picture films, prepared by the writer and Irving H. Anderson, for controlling the movements of the eyes in reading, and are herewith repoduced at the request of Professor Donald Durrell. For a technical account of the various experiments here mentioned, the reader is referred to articles in "The Psychological Record," Vol. I, No. 28, December, 1937, and Vol. II, No. 7, May, 1938, the Principia Press, Bloomington, Indiana, by the writer and Irving H. Anderson. The titles are: "A New Method of Teaching Phrasing and for Increasing the Size of Reading Fixations," and "Controlled Reading by Means of a Motion-Picture Technique."

2 Moore, H., "Training College Freshmen to Read." Journal of Applied Psychology, XVIII, 5: 630-4, October, 1934.

cise, repetition, drill are useful only as they give a chance for the purposes, the sets, the intentions of the learner to operate. At the moment we seem somewhat in the position of the distinguished college professor of physics who was ready to turn over his freshman course to a charlatan or quack if he could but revive the lost interests of his students in physical phenomena. Thus, I have long recommended a book with many shortcomings, Walter Pitkin's *The Art of Rapid Reading* because of its convincing propaganda as to the possibilities of the improvement of reading. A former graduate student of mine swears by the *Pressey Manual.* As a class experiment he undertook to try the manual out, although we were aware that some of its techniques were very questionable. We first photographed the student's eye movements, tested his speed—he was a frightfully slow reader — and comprehension of reading. He then set to work with the *Manual,* incidentally following the advice of the *Manual* in doing a lot of reading on the side, chiefly of easy materials—detective stories, etc., which he could read rapidly. Hitherto the student had confined himself largely to *serious* reading. There was no question about the outcome. Photographs showed that he had reduced the number and duration of his fixation pauses. His speed and comprehension had improved. The student's own account of the change, even to his greater efficiency as a superintendent of schools, in handling his correspondence, etc., all of which he credits to his work with the *Pressey Manual,* reads like a patent medicine advertisement.

We shall later demonstrate a method which corrects some of the faults of these techniques directed at improving the mechanics of reading and which at the same time preserves — as it seems to us — whatever powers of motivation they may have. Let us first, however, appraise from the standpoint of motivation some other methods and materials of remedial reading.

The outstanding example is the Fernald-Keller Kinaesthetic method of learning to read. What I now say can only be taken as my unsupported and personal opinion, but it *is* my opinion that the success of this method (particularly in the higher age and grade levels) in the hands of Grace Fernald and her collaborator is primarily due to the skill and pains relating to the smallest detail with which it has been developed and carried out, and the assurance of success with which its capable and inspiring sponsor can now surround it, rather than to the method itself. There is nothing which succeeds like success. It is the success of a personality, not of a method. Arthur Gates, in his *Improvement of Reading,* has given a perfectly sound and matter-of-fact appraisal of the method. I have made an excerpt of the passage, but can quote only a sentence or two: "In the writer's opinion, the main value of the writing practice is that it automatically or nearly automatically controls the direction of movement from left to right. Since difficulties in orientation are rather common among failures in reading, the use of writing would thus tend to correct one of the important limitations. The device also, of course, focuses attention upon the details of word structure and is therefore useful for pupils who tend to perceive the word as a whole rather superficially.

It is the writer's belief, however, that the value of this kinaesthetic approach lies primarily in its function as a means of demonstrating the direction of attack and of calling attention to the details rather than in any intrinsic or otherwise significant kinaesthetic influence."[3] The kinaesthetic method seems to me quite obviously a method primarily for the primary grades or for seriously retarded upper graders; that it can be used successfully with high school students and even adults again, to my mind, points to the marvelous powers of personal motivation.

The motivation of such excellent manuals as those of Strang in *The Study Type of Reading Exercises,* or Knight and Traxler's *Read and Comprehend,* and of Hovious in *Following Printed Trails,* is more intrinsic. There are certain very specific skills that can be taught to improve the rate of reading, to increase the vocabulary, and to abet the powers of comprehension. Strang's idea is to interest the student in the reading process by reading about reading. The student is first made aware of his own shortcomings through self-analysis and is encouraged to overcome them through the very definiteness and concreteness of the suggested remedies and devices. But unless he is thus motivated practice may not improve. This, at least, was the finding of one capable high school teacher of English who tried out the manual herself.

The effort at intrinsic motivation can be seen in the very chapter headings of the Knight and Traxler, and the Hovious Manuals: "How much fun can you find in books?" "How rapidly do you read?" "Can you skim?" "Do you need winged words?" "Can you find the main idea, get a bird's-eye-view of the whole?"[4]

In Hovious the appeal to the poor reader's self-interest is even more striking: "Before the Gong—Should you read better?" "Full Steam Ahead —How fast can you read?" "High Spots—Can you find the key words?" "Birds of a Feather — What words should be read together?" "A Word to the Wise—When is it safe to guess at the meaning of words?" "Photographers All and Eye Stretchers — How should your eyes move in reading?"[5]

We may pause at the *eye-stretching game* because here we get back to the questionable techniques with which we began our discussion.

Consider these statements: "Read your assignment with all your powers of concentration." "Think hard — so hard you can almost feel your brain working."[5] When one is really concentrating he is not aware of any efforts. He is single-minded, lost to the world. Hovious is advising distractions not concentration. Those who go in for concentration *consciously* usually come out with a headache.

Or again (quoting Hovious): "You need to increase your eye span. Therefore you need some eye-stretching exercises that will make you see more words at once." How does she propose to stretch their eyes? She admits "it is not easy to feel your eyes move and therefore a little difficult to con-

3 Gates, Arthur I., "The Improvement of Reading," Rev. Ed. The Macmillan Company, New York, 1935. For a continued and convincing justification for her own appraisal of her method see Fernald, Grace M., "On Certain Language Disabilities," Mental Measurement Monographs, No. 11, Williams and Wilkins, Baltimore, Maryland, August, 1936.

4 Knight, P. E. and Traxler, A. E., "Read and Comprehend." Little, Brown and Company, Boston, 1937.

5 Hovious, Carol, "Following Printed Trails." D. C. Heath and Company, Boston, 1936.

trol your eye movements," but offers this simple exercise a la the Pressey and Moore *Manuals,* of *making your eyes* shift from one X to another X across the page. Fix your eye on the first X, then make it jump to the next. When you have practiced with the crosses, try to move your eyes that way in reading a paragraph. Get a classmate to watch your eyes and count the number of pauses. If you or he finds that you are making six pauses, reread the exercises "intentionally trying to make only four."[5]

What can be more distracting? Trying to do two things at once. The habits of eye movements are best left as they have become through habit and training, the involuntary tools of the mind. Even a temporary awareness is futile because as we shall show, the mind cannot control them without perhaps hundreds of hours of distracting practice. The methods of training which we are now about to demonstrate will do sufficiently for the "eye-stretching," but will keep the process of eye movements involuntary.

There have been two lines of laboratory experimentation, each extending over approximately the last sixty years which have furnished the factual materials for the present proposals for controlling eye movements. I should like first briefly to review them. The first series of experiments had to do with the description and explanation of the role of the movements and pauses of the eyes in reading. The second series of experiments dealt with the short exposure of reading materials in the so-called tachistoscope and later in the more familiar flash cards of the primary school.

A French physician, Emile Javal, seems to have been the first man to observe the peculiar movements of the eyes in reading. At least, if not the first to observe, he was the first one to record his observations and to inquire in regard to them. In 1878 he observed the eye-movements in reading by reflection from a mirror. Heroic efforts were promptly inaugurated to find a way of recording these movements. Lamare, a co-worker of Javal, devised a method by which the eyelid was made to interrupt an electric circuit each time the eye moved. He had the current pass through a microphone and counted the sounds produced by the interruptions. Twenty years later, Delabarre, then professor of psychology at Brown University, using a method invented by Ahrens, recorded the movements by attaching to the cornea a thin plaster-of-paris eye cup. By improving this method somewhat, Huey was able to make the first accurate measurements of the duration of the fixation pauses and movements of the eyes. Huey claimed that his contraption did no harm to the eye, but admitted that there was some strain.

A few years later, in 1900, Raymond Dodge (who was then a professor at Wesleyan University and who recently became emeritus professor at Yale University) developed a photographic method, which with slight improvements remains today the best method of recording the movements of the eyes. Dodge did not at once apply his method to the photographing of the eyes in reading as he was at the time more interested in studying other types of eye movements. He thus gave a student of his — the present writer — the chance of a lifetime to make the first series of photographic records of the movements of the eyes in reading. In the intervening years,

thousands of records have been made and hundreds of articles written relating and applying the findings to the problems of reading and of learning to read.

Paralleling these studies of eye movement, the second series of experiments, by making use of short exposure or tachistoscopic methods, have added materially to our knowledge of what goes on during the fixation pauses of the eyes and have furthered the analysis of the factors which determine the perceptual span in reading. A few years before Dodge began his experiment, Cattell had shown that an average adult reader could, in 1/100 of a second of exposure time, perceive equally well three to four letters, two disconnected words (up to about 12 letters) or a short sentence of four words (or approximately 24 letters, if in words). This study clearly indicated that it is the *mind,* or the central nervous processes, rather than the characteristics of the object, which determines the span of perception.

Having the same import are the recent observations of Luckiesch and Moss as reported in their new book on the science of seeing[6] that it takes several times as much light to read numerals (as in stock market quotations) as to read words of the same length and size of type. Why? Because the mind has learned to perceive the words as wholes, whereas numerals can seldom be grouped except in familiar dates like 1938 and thus need to be examined in more detail and hence need more light.

Interesting in this connection are the measurements showing that at a reading distance of fourteen inches, a word of only four to five letters in eight- to ten-point covers the area of the greatest acuity of vision — that of the fovea. The size of this field of acute vision varies among individuals, but no correlation has been found between differences in the size of this field and the perceptual span, which would support the argument that, just as it is not the characteristics of the object, so it is not the characteristics of the sense organ (or at least only in part) but the *mind* which determines the size of the span of perception.

I stress these facts because a Los Angeles oculist believes[7] that persistent attempts to enlarge the perceptual span by flash and speed training often leads to deviations of the eyes— exophoria in nervous child with active mind, esophoria in the deeply intense child. He thinks that the efforts at increasing span and speed result in predominant use of peripheral vision (which may be the cause of muscular over-action.) He even thinks that poor memory is associated with excessive peripheral vision. This leads Luckiesch and Moss to conclude that "possible advantages of enlarging the perceptual span through various methods of flash training may be discounted by the possibility of accompanying ocular anomalies." But they add the cryptic remark that "increasing speed of reading is not necessarily detrimental to the eyes, when the changes are obtained through improved reading habits."

Mills', fears would have a better basis if it had been shown that the

6 Luckiesch and Moss, F. K., "Science of Seeing." D. Van Nostrand Co., Inc., New York, 1937.

7 Mills, Lloyd, "Function of Eyes in Acquisition of Education." J. A. M. Ass., 93:841, passim. 1929.

field of acute vision were more definitely correlated with the perceptual span. Further, he is probably unduly alarmed at the verbal (and it is mainly verbal) acrobatics of certain novitiate authors in this field, who speak of this "eye-stretching." As *exempli gratia* see Pitkin, Newton and Langham who, in their book on *Self-Improvement in Reading,* say to the pupil: "We dare you to do this. Focus your eyes on the third word but see all four words." This reminds me of the finger exercises I had to do as a beginner at the piano—finger-stretching in order to stretch an octave.

Two statements may be added. First, as Irving Anderson and I have shown, these authors do not accomplish what they talk about, and secondly, one of the most meticulously careful and skillful of investigators in this field—Raymond Dodge—has shown that at an angle of 15 degrees to the side of the point of regard, the shadowy form of words may still be seen sufficiently to influence the resulting perception, and that the general configuration of the word may be sensed when the word itself cannot be recognized. At the usual reading distance of fourteen inches the average fovea subtends an angle of 70 minutes and the average macular one of about 12 degrees. If one made use of only one-half of the area of the macular, there would be the *chance* for the *mind* to perceive 40 to 50 letters of eight- to ten-point type. Although Luckiesch and Moss find that the outer regions of the macular have only one-tenth the acuity of the fovea, the acuity of the former increases towards the fovea. Our hypothetical use of one-half of this inner area of the macular would employ but three degrees to either side of the point of regard. In view of Dodge's observations at an angle of 15 degrees to the side of the point of regard, it seems safe to conclude that we *can see clearly enough* more letters, words, and phrases than we ordinarily *perceive.*

I may summarize by quoting from a paper which I prepared last summer: "The recently awakened interest of the school world in the prevention and correction of difficulties in reading and in the improvement of reading in all classes from the first grade through the university and into adult life has also resulted in another questionable adventure, 'eye-stretching,' as it has been called by one alert pedagogue. It is an effort to increase the reading span by direct action, i. e., training the eye movements, and thus to decrease the number of fixation pauses required to read a given line. If you make six pauses, try to make five or four. Here again, caution may be advocated. The best ways to improve reading will still leave the movements and pauses of the eyes the involuntary tools of the mind." What these methods may do is to increase the perceptual span by offering the reader fresh motivation. That is, they succeed not by stretching the visual span, but by spurring the mind. And so we can agree with Luckiesch and Moss that there is no danger when the changes are obtained *through improved reading habits,* and this is what our new procedure also offers the opportunity for.

READING INSTRUCTION IN THE EDUCATIONAL SCHEME

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INTRODUCTION

READING is universally recognized as one of the most important activities in the school program as well as in life activities. It is difficult to over-emphasize the importance of reading in modern life. Educational leaders of the past rightly emphasized the necessity of development of ability in this skill process. Unfortunately, however, they failed to realize that such development could best take place in a program that took cognizance of the fact that reading has no subject matter of its own. Literature, history, geography, and the other great fields of human interest all have a content of their own, but reading has no such content. The failure to recognize the implications of this fundamental truth led to the development of programs of reading focussed upon reading assignments and lesson techniques based on reading as an end in itself.

The organization of reading programs within the framework of reading as a subject, has tended to magnify the "subject of reading" to the neglect of the *functional point of view of reading instruction.* Reading ability has functional value when it is used as a means to an end in relation to experience in the different fields of human endeavor and achievement. There is a growing conviction that the future development of the reading program can best be achieved through a utilization of the idea that reading is a tool. This point of view implies that objectives for reading should be stated in relation to the subject-matter fields. The restricted interpretation of such oft-repeated objectives as the "development of an interest in and love for reading," "comprehension of material read," or "word recognition," leaves much to be desired. Too often classroom practices set up to attain these objectives have failed at the point of transfer of abilities to functional reading situations.

The functional approach to reading does not eliminate those phases of instruction usually associated with activities for beginning readers. Neither does the position minimize the use of basal materials for the development of reading abilities. The necessity of development of basic skills, the use of repetition in vocabulary development, and other matters essential to correct reading program.

The position taken has reference to the approach to reading from the social utility standpoint. When this functional approach constitutes the criterion of evaluation of activities carried out in reading lessons and teaching methods square with it, reading is a meaningful and enriching process from the first lesson. Deadening exercises in word calling, repetitional oral word calling by groups, and the

getting of reading assignments for no other reason than that they were assigned will then have passed.

The Functional Approach to Reading

What then, constitutes functional reading? We can best approach this question by calling to mind the familiar aim of education; namely, "Education is life." If this point of view is accepted, we recognize that the school should develop and conduct a life-like program. Then, if the application is made to reading, the only conclusion is that the objective of all reading instruction should be to make it life-like, which demands the employment of reading as a tool of learning, experiencing and appreciating.

This means that every aspect of reading essential to the proper attack upon problems arising out of the work in the various subject-matter fields is best developed in relationship to those problems. In order to make an intelligent attack on the problems arising out of the subject-matter fields, certain basic reading skills, habits and attitudes are needed. The development of these basic reading skills, etc., in relationship to the problems arising out of the content subjects, constitutes functional reading instruction.

The importance of reading in life has led to a mistaken emphasis upon it as a school subject in the elementary school. The adult is prone to say to the entering child, "You are now old enough to go to school, you can begin to learn to read." To the contrary, it is well known that many children are not ready to begin the rather difficult and complex task of learning to read because of lack of physical, intellectual, or emotional maturation. And, frequently more important, many children lack a richness of experience that is essential to a favorable approach to reading activities, We would do better by children to say to them with a proper recognition of the fact by the teacher, "You are now old enough to go to school, where you will have many happy experiences. There you will learn to do many interesting things, like reading and writing, which will help you to have even happier and richer experiences than you could otherwise have." Whether the deeper significance of the distinction would be clear to a child might be questioned, but it should be clear to teacher and parent and the emphasis should be rightly placed upon the function of the school in relation to life experiences.

Failures in Reading in the Elementary School.

No stronger criticism could be made of the shortcomings of the methods of teaching reading in the past than the record of failures of children in reading achievement. Percival[1] found that of all failing pupils in the study made, 99.15 per cent of those failing in the first grade were given failing grades in reading; approximately 90 per cent of those in grade two; 70 per cent of those in grade three; 56 per cent of those in grade four; 40 per cent in grade five; 33 per cent of those in grade six; and, approximately 25 per cent in grades seven and eight. There are many reasons for the failure of children which do not primarily reflect upon the teacher or the methods

1 Walter P. Percival, "A Study of the Causes and Subjects of School Failure," Unpublished Doctor's Dissertation, Teachers College, Columbia University, New York, 1926.

of teaching. The causes of failure do, however, demand the attention of the teacher and if they are not isolated and dealt with constructively the teacher may be said to be at fault. And obviously, if correct procedures are not executed, the teaching efforts are doomed to failure. Such factors as mental development, which is basic to reading readiness, speech and language development, visual and auditory ability, maturation of the function of the eye movements of the child, as well as social and emotional development must be reckoned with in relation to equipment for learning to read.

The Psychological Basis of Functional Reading Instruction.

There have been only two basic methods of reading instruction developed and promoted in American education. They have been the *synthetic* and the *analytic* processes. The former was the logical plan, the latter the psychological plan. Under the synthetic process and the more logical procedure, the simplest unit in form was taken as the starting point of instruction. The child was first asked to learn the A B C's, then, phonic sounds, then to recognize words of one syllable, and later, phrases, isolated sentences, and finally, paragraphs. In keeping with this method of instruction, spelling and handwriting went hand-in-hand with reading. Oral reading and oral spelling were used as tests of ability and progress of pupils. The New England Primer was based on this methodology, entirely logical in form and structure. The Blue Back Speller (1783), which took the place of the New England Primer as a speller after nearly a century's use, is based on the same principle. McGuffey's Eclectic Readers (1867), were not entirely divorced from this method, and gave simple descriptive sentences of black and white of accompanying illustrations which appeared in the text.

Method and content have never been separated. The use of the materials presented had necessarily conformed to patterns implied in the materials placed in the hands of the teacher. It is readily seen that the teacher's work is frequently delineated through the organization of materials which the teacher considers the curriculum outline. This has been the case in the use of text-book material of the types indicated above.

In contrast to the methods delineated above, the analytic or the psychological approach to reading instruction is recognized as a preferred methodology. By this method the child is led into the reading process on a functional basis through the use of reading as a medium of expression of meaningful experiences. Thought units constitute the basis of reading content instead of logical form units out of which words are built. Complete experiences, appreciated by children and vitalized to them through class activities after having been so presented, are translated to informal written records by pupil dictation and later, by their interpretation. The transfer from this type of medium of expression of experience to similar experiences as found in printed materials is an easy matter for an intelligent teacher. The fundamental process involved is that of associating meaningful experiences with symbols (sentences and phrases as thought carriers) which otherwise have no meaning to children.

This program has as its basic psychological foundation the organismic point of view. The child is viewed as an entity so far as his reaction mechanism is concerned. As Hartman[2] has said: "There exists natural circumstances in which what happens in the total is not conditioned by the nature of the parts in their mode of combination, but on the contrary, what occurs in any part of this whole is determined by the inner structural laws of this entirety."

The mind is intimately knit with the body in the process of reacting to any stimulus. Reading is not an exception and, in fact, the organism is reacting in its entirety if the child is really experiencing that for which the printed symbols stand. Reading, therefore, is a much more highly involved process than the simple motor activity of the use of the eye, "the seeing device," and the mechanical response to the physical stimulus. The activity called reading, though dependent upon physical faculties of the organism, is not limited to it nor possible by the physical function alone. Stating this same problem in different words, the eye may focus upon a printed symbol and this symbol may constitute a stimulus and be recorded on the retina and forthwith send the image of the symbol by way of the optic nerve to the section of the brain which constitutes a receptor for visual stimuli. Reading, however, in a genuine sense, has not yet taken place. The printed symbol, transmitted through the optic device, must have a meaningful association through some past experience if the organism is to react in terms of memory, overt expression or emotional reaction.

The deficiencies and errors which have crept into the instructional program in reading by virtue of a lack of understanding of the psychological basis of reading have been many and in many cases they still persist. The error of associating spelling and handwriting with reading instruction has only added to the burden of learning the tool skills, since spelling and handwriting abilities are built up by the synthetic process. Another error which has persisted has been an overemphasis upon oral reading activities which children do less rapidly and with less comprehension than they are capable of reading by the silent process when using the same materials. The well-developed process of silent reading consists of the fusion of the thought conveyed by phrases into sentences and sentences into paragraphs as units of meaning. These units successively become associated with larger hierarchies of thought substance. It is easily recognized that the more nearly an individual can disregard words and word-structure and attend to thought relationships, the more efficiently will he read.

The point needs nothing more than mention that the sooner the individual develops relatively high degrees of accuracy in these functional services of reading the sooner he will be equipped for the use of this tool of civilization. For the purpose of analysis of skill, we may say that there are four stages of development of this skill. The first stage is that of associating meaningful experiences of nat-

2 George W. Hartman, "Gestalt Psychology" (New York: Ronald Press Company, 1935), p. 63.

ural life activities with printed symbols. The second is that of development of accuracy of interpretation of symbols which present new meanings to the individual. The third stage is that of extension of experiences through the use of reading under the guidance of the teacher in functional activities. The fourth stage is that of the use of the skill and ability to gain experiences from reading materials. It is readily observable that like the fact that "all roads led to Rome," the motive behind teacher guidance in all four of the stages delineated above and the basic methodology, explicit and implicit, is the functional use of reading.

THE INTEREST INVENTORY IN DIRECTING CHILDREN'S READING

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CURRICULAR content, many educators assert, must deal with children's problems, needs, and interests if it is to have functional significance and immediate meaning and application. Various methods for obtaining this type of information have been utilized in progressive schools. They have found expression in non-reading courses of study; conduct curricula; activity units; various methods associated with the names Froebel, Rousseau, and Montessori; and in the numerous adaptations of the project method.

In all these points of view or educational methods, there inheres a major premise: namely, that the vehicles and instruments of educational growth are basically dependent upon children's felt needs or intrinsic interests. But the methods of ascertaining children's interests have been incidental, or at best poorly conceived. Often they seem to depend upon a naive credulity in children's verbal response to a few leading questions. In other instances, the interests are expressed under certain conditions of the classroom which lead children to state or express the wishes or "interests" of the teacher. The resultant teacher-inspired sequences of projects sometimes recur year after year.

The writers of this article have experimented for several years in the development of techniques for ascertaining with relative precision the actual interests and probable needs of boys and girls. Several methods for obtaining first-hand information were tried. In some schools, an "I Wonder" box was placed in each classroom and the children in the primary and intermediate grades were asked to place therein unsigned questions concerning their most troublesome and unsolved problems. Although this procedure was so successful that it remains a permanent feature of certain schools, it was felt that it did not yield data sufficiently comprehensive to be of maximum help in guidance. A simple questionnaire concerning recreation also was used, but it, too, proved to be inadequate, since many interests and problems were not revealed in this cursory manner. Thereafter an inter-

view form was developed; it was used for several years and revised three times to incorporate significant new items and to eliminate or modify irrelevant elements. This form, it was found, yielded practical and reliable data.

The Interest Inventory, as it is commonly known (Form III of the Witty-Kopel *Diagnostic Child Study Record*[1]), serves primarily to guide the teacher in a systematic attempt to ascertain and to understand children's background of experience and their present impelling interests. In personal informal interviews the teacher discusses with each child his favorite leisure activities, hobbies, play preferences, familiarity with community places of interest and modes of transportation, vocational ambitions, wishes, fears, dreams, personal problems and social relationships, home and school attitudes, movie and radio preferences, and reading habits and experiences. Typical of the questions designed to elicit information of this character are the following items selected from Part I of the Inventory:

When you have an hour or two that you can spend just as you please, what do you like best to do?

What are the names and ages of your close friends?

How often do you go to the movies? With whom, usually?

Have you been to a farm? A circus? A zoo? Have you been to a museum of art? Other museums?

What would you like to be when you are grown? What would your father and mother like you to be?

Do you have a pet? What? Are you making any collections? Of what? Do you have a hobby? What?

What radio programs do you listen to regularly? How much time daily do you spend listening to the radio?

Do you dream at night? Never, sometimes, often. (Underline.) What do you dream about?

Do you enjoy reading? Do you like to have someone read to you? Who? Apart from lessons, about how much time each day do you spend reading? Do your parents encourage you to read at home?

What newspapers do you read? What parts do you like best?

Part 2 and Part 4 of this Inventory consist of check lists. Part 2 contains eighty play activities reported as favorites in studies of elementary school children. The child is instructed to read the list and "to draw a circle around each number that stands in front of anything that you have been playing with during the past two weeks, or anything that you have been doing the past two weeks just because you wanted to do it." Of course the teacher checks the list for children unable to read. Moreover, record is made of the three activities "liked best."[2] The pattern of play activity revealed by checking this list furnishes important insights into the adequacy, maturity, and function of the child's play life.

Part 4 of the Inventory, a separate form, is a graded list of books popular in Grades II-VIII. The numbers preceding the titles indicate their grade placement: *e. g.*, the 200's are of second grade difficulty, the 300's third grade, and so forth; the 700's, however, are of seventh and eighth grade difficulty. Children who have "fourth-grade reading ability" or more may usually be asked to read and check the

1 The Interest Inventory and the complete Diagnostic Child Study Record (and Manual) may be obtained from the writers.

2 For children in the first and second grades, a simpler and shorter inventory is employed. This "Primary" form of the Inventory may be obtained also from the writers.

lists without the teacher's personal supervision. Children of lower reading status frequently require and should receive assistance in reading the items.

The child's response to these lists may yield information of great significance. Thus the number and kind of play activities in which participation is reported may be considered a rough index to a child's sociability, and to his general maturity level in this area of his growth. In addition, these dominant play interests may also be followed effectively in promoting the reading of worthy related material. Similarly the child's report of books which he has read reveals much about the extent and present level of his reading experiences, his interest in and attitude toward reading, and the types of material he habitually chooses. In recommending books, it is important to know from what grade levels the child chooses books as well as the grade level upon which he can read effectively. Moreover, the areas represented by the previous reading may suggest related materials which will intensify or extend the present interests of the child. At times, it appears desirable to direct the child to read certain types of material or to examine specific books in lists which other children have reported that they like—in which his meager background thus may be profitably extended. Through careful study of children's responses to such a list, a teacher may gain insights concerning the *quality* of the child's previous reading; the teacher may discover also the extent to which the child has understood, organized, and retained that which he has read. (The informal character of the interview permits latitude for added questioning.) And she may discern a continuity or a lack thereof in the child's sequential experiences in reading. Thus, she may grow to be truly sensitive to children's interests or needs.

Part 3 of the Inventory is designed for the teacher, whose attention is directed to items important in evaluating the child's responses and attitudes. The teacher is asked to use this check list in describing and interpreting the child's attitude during the interview, his understanding of the questions, and the reliability of the responses elicited. Other items are included to stimulate the teacher to judge the adequacy of the child's play life, his home and experiential background, and his associations with other people. Space is provided for recording: (1) inconsistencies noted in the interview, and (2) recommendations based upon the data.

The time required to conduct such an interview ranges from thirty to forty-five minutes. It is frequently desirable for each teacher to plan to spend half of her time during the first few days of the semester in this endeavor. Teachers may work efficiently in pairs during this time, staggering their periods in order that children who are not being interviewed by one teacher may receive the supervision of the other in different work. Teachers find that the time thus spent in gaining knowledge of their pupils is usually well rewarded. However, for the Inventory to yield maximum benefits, it must be employed judiciously. The teacher must understand its purpose; and be familiar with its content in order that the device may be employed *not primarily as a questionnaire, but informally, as a suggestive guide.* Of

course deviations from the text should be made in many instances. Since the form was prepared for use with children of a wide age range, some items will not be relevant at certain age or grade levels, and these, of course, should be omitted. In addition, some questions are general and should be followed with more specific inquiries. Information obtained by following some simple answer or remark may prove of greater worth than all the replies to a mechanical, routinized interrogation.

The Inventory has been used by approximately 200 teachers who, working with the writers, have examined about 3,400 children in the kindergarten and in Gardes I to VIII of the Evanston, Illinois, public schools. (Similarly, in many schools throughout the country, the form has been employed profitably in individual and group study.) The coöperation of the teachers was secured in making and revising the form and in its preliminary administration. The responses of the children to more than 200 items have been tabulated according to age and grade. Analysis of these tabulations will be found in several articles now in press.[3]

The Interest Inventory may be used profitably whenever one undertakes the study of a poor reader. Use of the instrument has several values. It enables the teacher to understand better many of the problems and attitudes of each child, to effect the friendly, sympathetic teacher-pupil relationship essential in all productive school endeavor, and to obtain an indication of the types of subject-matter most appropriate for a particular child.

After this device was used in several elementary and secondary classes of one school, there appeared a teacher-pupil rapport unique in large classrooms. Teachers became aware of the value of ascertaining and employing children's intrinsic interests in new and varied ways. By providing opportunity for the *directed* resolution of these interests, decided improvement in learning resulted.

The process of appraising children's interests has a desirable effect also upon the mental hygiene of teachers; hence classroom instruction gains vitality. Teaching becomes an exploratory adventure, a continually varied endeavor to meet the stimulating intellectual challenge of children free to think and to express themselves in the classroom.

But caution and discrimination in encouraging children to extend and intensify their present interests are needed,—especially in the case of poor readers whose interests are often immature or trivial. Frequently, the Interest Inventory reveals the fact that the teacher's major problem is to stimulate and develop new and more enduring interests. However, to the objection frequently voiced that children's reports do not reveal "real" or "permanent" interests one may observe that interests need not be permanent to be of great value. Interests should be ascertained as aids in understanding and guiding children *now*. The use of interests as a curricular agency should not imply that the curriculum will become simply a motivated duplicate of children's out-of-school activities. Some of the favored leisure pursuits of children involve the use of

3 In "Journal of Educational Psychology," and "Educational Administration and Supervision."

shoddy, mechanical, commercialized devices, and lead to unwholesome vicarious experiences. George S. Counts writes: ". . . children's interests are potentially as many as the activities of mankind, as varied as the patterns of human culture, and almost as fluid as the passing fashions. They adapt themselves to the most diverse situations and assume both the color and form of their surroundings."[4] In other words, interests are largely acquired, but their direction and cultivation is a function of education. It is clear, therefore, that consideration of and respect for children's interests need not lead the teacher to abrogate her primary responsibility for *influencing and guiding* children's growth.

It should be evident from this critical discussion of the nature and value of children's interests that we do not believe them to be an adequate substitute or basis for an organized curriculum. However, the curriculum encompassing social as well as individual values should be sufficiently flexible to permit the emergence and expression of individual and group interests which are deemed worthy.

Curricular flexibility is essential in programs designed to rehabilitate poor readers—children who, having experienced frequent or chronic failure, need *successful* learning experiences which are highly motivated. Successful reading should characterize the child's experience in every area of the school wherein demands for reading occur. Every class, therefore, becomes to some degree a center wherein reading is directed. Moreover, the curriculum must be rebuilt for non-readers in terms of their interests—not remade in the shadow of the interests of mentally superior children. The person who develops a remedial reading program has two major obligations: (1) to provide an orderly, systematic series of silent and oral reading experiences in accord with the ability of each poor reader, and (2) to develop a series of reading and related experiences which will extend and intensify each child's interests. It appears possible to accomplish both aims in the individual or group work with poor readers. We have demonstrated that the traditional English course of study can be replaced by a *reading* program which utilizes children's interests and also provides an orderly, planned sequence of appropriate language experiences in individual and group projects.[5]

This point of view is of utmost significance. Too frequently, remedial programs appear to have one basic aim: simply to provide reading matter on the level of children's ability—material which children are able to read. The problem of adequate motivation extends far beyond meeting this simple but essential aim.[6] It implies not only securing reading material which children *can* read; *it implies finding subject matter which is worthy of being read and appropriate in meeting individual and group needs.* The falsity of procedures which omit consideration of the propriety of the material to be read is illustrated by the prescription of simplified versions of

4 In Caswell and Campbell, "Readings in Curriculum Development." New York: American Book Co., 1937, p. 370.
5 Paul Witty and David Kopel, "Motivated Remedial Reading in the High School." English Journal, 1936, 25, 533-542.
6 Paul Witty and David Kopel, "Motivation and Reading." Educational Administration and Supervision, 1938, 257-264.

the classics and other "approved" literature for poor readers. Examination of the interests of good and poor readers shows such great disparity that these prescriptions appear immediately to be shallow and futile.

It is clearly evident then that the task of the teacher has simply started when she has ascertained children's mental and educational levels from which successful reading may proceed. She has then to initiate the subtle process of ascertaining a fair sampling of the activities and interests which characterize each child. The Interest Inventory will assist in this endeavor. Having discovered the varied and frequently contradictory interests of the poor reader, the teacher is better prepared to choose reading experiences. But to do this intelligently she must be a competent student in the realm of children's books. She must know many books and sources of materials to suit the diverse needs of pupils. Discriminating knowledge of the better book-lists, acquaintance with new books (the Booklist of The American Library Association is a source of incalculable value in providing information about new books and other materials for various interests), knowledge of printed material upon vocations and occupations, and numerous other literary sources is essential if the teacher is to utilize and direct children's interests in appropriate and profitable channels. Since many of the problems of the poor reader are problems of *living now*, the teacher must have in addition a social understanding that comes only from reading widely about and participating in vital issues and activities of the present-day social milieu.

The successful teacher of poor readers, therefore, becomes a student of the genetic growth of children, in order to ascertain individual needs; in addition she becomes an intelligent participant in the issues and activities of contemporary life in order that she may guide children to attain better social understanding and adjustment. Finally, she cultivates familiarity with the realms of gold in children's literature, old and new. In these ways she becomes expert in stimulating and guiding children's growth in reading.

INDIVIDUALITY IN BEGINNING READING

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DURING the past five years we in the Nassau School have attempted to loosen the control upon the beginning reading program, so as to respect in a small way the individuality of the child. While we have met with a measure of success, we hasten to say that we have no panacea. Furthermore, the conditions under which we work and the things we do to gain our objective might be impossible for some people. For the most part our children are average and above in intelligence, and they come from homes that are probably a little above average economically and socially. Our primary grades have about thirty students each. Children to a pretty high degree are permitted to make their own reading selections. Many of their choices are brought from home and other places. The teachers give as much help to the child in the use of these as they do to school books. Children who fit socially into a group are permitted to go into the third grade reading a primer. One can sometimes see a child reading a primer in a third grade seated beside a child using a fifth reader.

During the early days in the first grade children are permitted to choose from a large variety of pre-primers, primers, picture books and easy books. The teacher spends a few minutes with each child. Sometimes she reads to the child, or perhaps the child attempts to read to her, or they both talk about pictures. As a child shows his readiness through his interest and his powers to hold to reading forms, he is encouraged to read. During the first three months of school there is no sudden break between the reading readiness period and the beginning stages of reading. The teacher spends the same amount of time with each child in both stages. The child who is beginning to read is encouraged and sometimes required to limit his reading activities to pre-primers. But he is usually given a choice among these books. It is not infrequent that it appears to be a very healthy enterprise for some children to attempt for a few days to read from books that are too difficult for them. A sudden jolt does occur at the end of about three months when those children who have not given evidence of readiness are required to begin reading. We hope that this can be removed in the near future.

This program has met with fair success. A goodly portion of the slow first-grade readers retrieve their loss by the end of the third grade. Details have been published elsewhere. We are primarily concerned here with reporting success in reading in relation to the vocabulary burden encountered in the beginning stages of reading. The difficulty would vary with individuals, since each child has much to do in selecting his own materials.

We have observed that children who read from related texts, such as pre-primers and primers of a single series do not grow into better readers than those who gained their beginning read-

ing experience from a variety of easy books that had a greater number of new words. To test our observations a record was made of the reading done by each individual within a group for two years. The Metropolitan Reading Test was given these children at the end of the first and second grades. An analysis was then made of the first two thousand words read by each child. The vocabulary burden was then determined in the customary way by dividing the total number of running words by the different words. It was thought that an analysis of the first two thousand words was sufficient since highly controlled vocabulary burdens are recommended only during the beginning stages of reading. As children progress with this tool most authorities are quite willing that they branch out into varied materials.

Thirteen of the twenty-two children within the class were below grade norm at the end of the first year. This number was reduced to six by the end of the second year. We felt that if the group had remained together all save two would have surpassed the grade norm at the end of the third year. This complies with our policy of spreading beginning reading instruction over the primary grades, and not forcing all children to attain the first and second grade norms. The correlations between reading progress in the first and second grades and the vocabulary burden of the first 2000 running words read, was −.09 and −.05 for first and second grades respectively. This quite pointedly shows that progress for this group at the end of these grades was unrelated to vocabulary burden. Further evidence of this fact is seen when children of the same intelligence quotient are examined. Of two pupils who made approximately the same progress at the end of the first and second grades, one used such a heavy vocabulary burden that the average repetition of the first 2000 words read was only 7.4. Quite the opposite was the experience of the other whose vocabulary was repeated more than twice that number. For three pupils with intelligence quotients of 101 each using approximately the same vocabulary burden, two made rapid strides in reading during the first year while the other grew only two months.

A second ratio of running words read by February 1st to different words was calculated. This meant that a vocabulary burden ratio was found for all of the group except four after they had read more than 2,000 words. A study of this showed that there was a rise in ratio which reveals the reason for these children reading. They went from book to book, from series to series at their own pace, and seemingly in an enjoyable fashion. And as this was done they drilled themselves on a rather limited vocabulary. It was very evident to those who worked with these children that their vocabulary burden quotient rose as they read. Perhaps a few cases will prove interesting:

Case 1. Read the following books by February 1st.

	New Words	Running Words
Happy Hour Series—Bk. II Pgs. 3	42	81
The Terry Book—all pgs.	95	420
Easy Steps to Playtime—all pgs.	24	1242
Christmas Time—all pgs.	83	1112
Tatters—all pgs.	36	1009
Everyday Life Primer—all pgs.	96	3992
Totals	376	7956

Case IV. Did this reading by February 1st.

	New Words	Running Words
Terry Book—p. 5	9	18
Playing With Pets—p. 5	4	14
Wag—p. 9	15	73
Playmates—all pages	55	1206
Tatters—all pages	65	1009
Totals	138	2320

Case XXI. Read these books by February 1st.

	New Words	Running Words
Playing With Pets—to pg. 12	23	114
Frolic and Do-Funny—to pg. 12	14	128
Terry Book—all pgs.	95	420
In Rabbitville—all pgs.	268	4867
John and Jean—all pgs.	63	2230
Children's Own Reader—all pgs.	118	2895
Totals	581	10654

Evidence of the fact that this reading program grew out of the community life of the children is seen in the reading materials brought to school voluntarily. During the first year seventeen children brought 171 things. The record of Case I shows a variety of home interests most of which involved reading experiences:

Shirley Temple Book.
Sunny Bunny.
Old Arithmetic Book of Father's.
Who Am I Book.
Pictures of Reindeers.
Little Lady Bear Book.
Safety Stories.
Book of Knowledge.
Told the Story of Heidi.
Told the Story of Little Pigs.
Told the Story of Jolly Kid Book.
Maps of the World.
Mother Noah Book.
Willie Mouse Book.
Bobby and Jane at Park Book.
Plant Book.
Four Litle Kittens.

Our work with this group and approximately 200 others of about the same intellectual and social levels leads us to believe that reading can be taught individually in classes of approximately thirty. By so doing we might expect to achieve traditional academic objectives by the end of the primary grades. The virtue of the individualistic program lies in the fact that the teacher is in a position to deal with the intellectual, emotional, and physical side of each child. This is only the first step. A second, and probably the one of most significance, is the teacher's ability to give the needed help to each child.

Our study shows that when one is working with children of average and above average intelligence, there can be far greater choice in the use of materials in the beginning phase of first-grade reading than modern reading programs permit. There is no real evidence that the common practice of selecting the reading materials for children of this level on the basis of the intelligence quotient is good.

There remains other problems to be solved. Significant among these is how to respect an individual's best way of learning. We know that some children seemingly learn best by letters, others by a combination of letters, and still others by the very popular method of whole stories. Another problem has to do with the time children should begin the use of the reading tool. Reading readiness tests seem to be of little value in determining just when this should be for a particular individual. Sometimes when we run counter to this principle of readiness, a child suffers. Case IX is an example of a child who went through much mental pain during his

first and second years in school because he was forced into reading eighteen months before he was ready. How foolish and useless all of the pressure placed upon this child during his first two years looks now, when in the latter part of the third grade he uses a second reader nicely. But the greatest and the most immediate problem is reducing the size of classes. This will take place when professional people convince themselves of the need. This principle has been clearly demonstrated in our school history.

EXPERIMENTAL EXERCISES IN LEARNING TO INTERPRET READING

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THE reading exercises to be discussed in this article were prepared during the fall, winter and spring of the school year 1937-1938. They were used with a total of about twenty children, ranging in school grade from seventh to twelfth, at the Cambridge School, Kendall Green, Massachusetts. The children all had a reading handicap or retardation of some degree.

The exercises varied greatly in difficulty, some being adapted to younger students, some to older students, so that very few of the exercises were used with all twenty students. However, the exercises were used as rapidly as they were prepared and therefore did not represent a logical development from easy to hard, from one kind of task to another, etc. There was no opportunity to standardize and equate any of the material. For these reasons only a subjective judgment is possible as to the results of this kind of instruction. Under these circumstances the purpose of this article is not to discuss results but to discuss the purpose of such exercises, to describe and reproduce some of the exercises, and to stimulate further experimentation with materials of this kind.

Two different kinds of exercises are to be discussed: 1. Exercises dealing with the determination and discrimination of word-meaning from context; and 2. Exercises dealing with interpretive understanding of reading.

I. Exercises for Determination and Discrimination of Word-Meaning and Context.

The underlying assumption of exercises of this kind is that vocabulary development has three inter-related aspects: 1. *Increasing the number of words to which a meaning is attached;* 2. *Increasing the number of divergent meanings known for a given word;* 3. *Increasing sensitivity to the way in which the meaning of words is conditioned by context.*

Another assumption is that the process of vocabulary development in each

and all of these aspects goes on continually from infancy to maturity as a spontaneous process of assimilation, that we learn the *meaning* of a word, the *meanings* of a word, the *shades of meaning* of a word from hearing the word used in various ways in speech and in writing—that is, in contexts of one kind or another.

On the basis of these assumptions an attempt was made to build exercises which would stimulate this natural process of assimilation, make the student more aware of this process, give him a kind of method.

In choosing the words for which a context was to be created, certain care was, of course, exercised to see that the words were unfamiliar to the student, or that they had certain unfamiliar meanings, or that the context represented some particular problem of discrimination in relation to the chosen word. In general, the words chosen were selected from words failed by a majority of the group of students on the vocabulary sections of the Iowa Elementary and Advanced Reading Tests and the Traxler Reading Test. However, in the writing of the context, certain words were used which, in the subjective judgment of the writer, were also unfamiliar, and these words were included in the "chosen" words.

The construction of the exercises is obvious from the sample reproduced below. The chosen words are read aloud by members of the group, the first few paragraphs are also read aloud and discussed and the meanings located in the list of meanings. Once the procedure is clear, the students work silently on the remainder of the exercise.

The exercise reproduced was used with children of grades 7, 8 and 9.

Word-Meaning from Context.

I. The following words are to be read aloud:

1. adequate
2. inadequacy
3. auxiliary
4. locomotion
5. corrupted
6. corruption
7. bribery
8. enactment
9. counter
10. decorative
11. utility
12. mutinous
13. foliage
14. wrathful
15. volley

II. Now read each of the following sentences and paragraphs in which the above words are used. Study the sentences carefully and see if you can tell what the words mean from the way they are used. You had better underline the words when you come to them. After each paragraph, turn to the list of meanings and find the meanings for all of the chosen words which are used in the paragraph you have just read. A few of the words are used in two consecutive paragraphs. The teacher will point those out to you. In such cases read both paragraphs before attempting to find the meanings.

Word Meaning from Context

The supply of ammunition was adequate for only a few hours of fighting.

* * *

The strength of his constitution was adequate to the strains which the hardships of the journey put upon it.

* * *

He had a number of accomplishments, but none of them well developed. Among athletic people, he felt that his body was awkward and untrained. Among learned people he felt ignorant. Among musical people his voice sounded like a raven's. Among artistic people he felt that he was lacking in taste and artistic judg-

ment. At every turn he was painfully conscious of his own inadequacy.

* * *

The difference between an auxiliary sailboat and a motor sailor, is that in an auxiliary sailboat the sail is the primary source of locomotion and the motor is an auxiliary source, whereas in a motor sailor the motor is the primary source of locomotion and sail is the auxiliary.

* * *

The automobile workers organized a woman's auxiliary of their union. The primary purpose of the auxiliary was to improve the social life of the union in normal times and to take care of all the details in connection with feeding the men in time of strike.

* * *

His mind had been corrupted by too many years of luxury and ease, so that when trouble came he did not have the strength and courage with which he had faced much more serious troubles in his youth.

* * *

One of the greatest evils of our democratic political system is the corruption of people in public office. The blame for this must not be placed wholly on the politicians themselves. The temptations are great. There are powerful financial and commercial interests which stop at little in the way of vote-buying and bribery to secure contracts, to prevent the enactment of laws which are counter to their interests, or to obstruct the execution of such laws once they are passed.

* * *

In the dining-room some objects were useful objects and some were merely decorative. But in the kitchen, nothing was for decoration. Everything—the refrigerator, the stove, the pots and pans, the sink, the clock on the wall—was for utility.

* * *

The mutinous crew had gathered outside the captain's stateroom. It was their purpose to disarm him and take over control of the vessel.

* * *

In October they made a trip to Deerfield just to see the autumn foliage.

* * *

The crowd, already angry, became even more wrathful when the Minister of Foreign Affairs failed to appear. They dispersed, however, when the soldiers sent the first volley of rifle fire over their heads. They knew that the second volley would not be fired into the air.

* * *

Meanings.

a. Leaves of trees and bushes.
b. Contrary.
c. giving or taking money or other rewards for doing improper acts.
d. power of moving.
e. a burst of shot.
f. sufficient.
g. having to do with decoration.
h. weakened or deteriorated.
i. of supplementary usefulness or of secondary importance.
j. dishonesty.
k. usefulness.
l. passage.
m. in a state of rebellion against authority, especially at sea.
n. angry.
o. lack of desirable or necessary qualities.

It will be noted that in the passages the words are not underlined or in any way indicated. The child must locate each word for himself. In previous simpler exercises the chosen word had appeared at the head of each paragraph. In the next stage the words had been underlined in the passage.

It will also be noted that the double use of *adequate* and of *auxiliary* made it necessary for the children to abstract a meaning which would fit both cases; the use of *corrupted* and of *corruption* illustrated divergent meaning of the same word in different contexts. On

a still more advanced exercise the need for careful discrimination was carried further. Two meanings had to be found for initiative, one a trait of character, the other the political right of initiating legislation; *initiate* was used in the basic sense in connection with *initiative* in the specific political sense; *aggressiveness* and *belligerence* were used in the same passage as contrasted traits of character; *belligerent* (as a noun) and *aggressor* were used together in a passage which brought out the contrast between them as they are used in connection with international warfare, etc.

The guiding principle in the construction of the passages was to write a paragraph which sounded real—sounded as though it had been derived from some real situation—and in which, at the same time, the words were involved in such a way that the meaning could definitely be inferred. In the more advanced exercises a series of inferences was necessary. For example, the words *left, right,* and *center* were used in a political sense (together with two other chosen words—*amnesty* and *agrarian*). It was necessary to make a very close analysis of the whole passage in order to clarify the relationship and attach to each of these its correct designation of liberal, conservative or radical.

The children were obviously interested in these exercises—to the extent that their interest could be termed enjoyment. No machinery was established for measuring the results of such instruction, but the writer felt that during this phase of work he was witnessing children in the process of adding to their stature.

Though in many cases it was obvious that the exercise had succeeded in clinching for certain students words which had previously been within the periphery of familiarity, no attempt was made to determine whether the children retained the words chosen for the exercises. This would be worth doing, but the immediate objective was to stimulate awareness of the process of acquiring vocabulary, to provide a method for dealing with unfamiliar words when they are encountered, and to sharpen discrimination. Much further experimentation will be necessary,—experimentation of a carefully controlled kind.

If it proves that such exercises actually do stimulate vocabulary development, then work of this kind will have a twofold value: 1. To correct cases of vocabulary retardation; 2. To increase the general language ability of the American population as this population develops in our schools.

II. Exercises for Interpretive Understanding of Reading.

One of the fundamental assumptions underlying these exercises is that the reading process consists not only in following the author's thought, but in a spontaneous flow of thoughts of the reader's own which are stimulated by the reading; that these thoughts will vary with different readers; and that they will vary greatly in objective validity. Two people reading the same work at the same rate, and with a completely unimpeded grasp of the author's thought in a literal way, will read with difference of richness and value. In a case, for example, in which each of two readers could repeat the substances of what he had just read with equal detail, the difference between the associative and inferential processes which accompanied the reading might

presumably represent the difference between stupid reading and highly intelligent reading. This is what is meant by "interpretive understanding," as it is used here.

Sample Exercise 1.

The first sample exercise reproduced is very simple and was used with reading difficulty cases in grades VII and VIII. It involves understanding characters and motives, anticipating outcome, and some degree of background knowledge coupled with perception of logical relationships.

The story is from *Adventure Bound,* edited by Chester L. Persing and Bernice E. Leary. Book I of the Discovery Series, published by Harcourt Brace, 1936.

The story deals with two young flyers, Don Saunders and Bill Meade, who go out to meet another flyer named Arngren, whose plane is overdue. The reader learns at the outset that Arngren is constantly boasting of his perfect record in getting the mails through. This, together with some description of the weather—the high March wind—and with some suggestion that Arngren's delay in arriving is due to unforseen circumstances of some kind, are the principal keys to the story up to the point where the student stops reading and answers the questions. (This is toward the bottom of page 23 in the text, that is, the fifth page of the story.)

Interpretive Understanding.

1. Interpretation of Character. 2. Anticipation of Outcome. 3. Logical relations. *Westbound Mail* — "Adventure Bound," p. 19.

1. Read to the bottom of page 23 and then answer this question. Check the answer which you feel is the best one.

What is the attitude of Don Saunders and Bill Meade towards Arngren?

a. They really admire him though they are terribly irked by his boasting.

b. They hope he will spoil his record so that he won't be able to boast all the time.

c. They would like to see him have an accident and wouldn't help him if he were in trouble.

d. They secretly wish they were as good flyers as he is and are only jealous of him.

e. They consider him an able flyer and would make the same effort to help him out if he were in trouble as they would for any other fellow-aviator; they do not mind his boasting as much as they pretend to.

2. Now answer this question before reading any further:

What will happen?

a. They will have an accident and Arngren will rescue them and lord it over them.

b. They will meet Arngren on his way back to the flying-field and escort him in and so share his glory.

c. The high March wind will force them to make a landing in a cornfield, where they will find that Arngren has also made a forced landing; all three being in trouble together, they will patch up their quarrel

d. Arngren has had a smash-up. Don and Bill will find him and rescue him.

e. After they meet Arngren in the air, they race him back to the field and beat him.

3. *Finish the story and then answer this question:*

Did you notice that after Don Saunders set his plane down in the road, he made straight through the woods after a quick glance at the shadows of the trees and at his wrist-watch? *What was the significance of these two glances?*

a. The watch had a compass attachment on it and the shadows were pointing in the direction of Arngren's plane.

b. From the air he had observed the direction the shadows were pointing and he looked at his watch to see whether he had time to reach Arngren before he bled to death.

c. He had already observed from the air the compass position of Arngren's plane in relation to the stretch of highway and as a trained aviator he could determine compass direction by comparing the direction taken by shadows with the time of day.

d. As a trained aviator he naturally kept a careful watch of the time and looked at his wrist-watch merely out of habit. The shadows told him which way to go.

e. He had probably been a boy scout when he was younger and had learned to tell directions by comparing the time with the direction taken by the shadows.

In answering the questions in this exercise, the student makes a first and second choice. The following illustrates the method of giving credit:

Question 1:

a. This is the correct *Second* choice. The student who marks this as a first choice has failed to detect the fact that Meade and Saunders regard Arngren's boasting as merely a kind of pet weakness. Credit 1.

b. No credit. The student who picks this has failed to perceive the obvious good-heartedness that is attributed to both flyers.

c. A score of *minus one* for this. The student has failed to distinguish between good nature and spitefulness carried to a criminal degree.

d. No credit. The student has missed the hints as to the flying ability of Meade and Saunders and has not correctly understood the tone of their criticism of Arngren's boasting.

e. This is the correct *First* choice. Credit three.

The above offers the general method for rating answers by a careful comparison of the text. The answers of Question 2 would be rated in the same way. A complicated system of scoring has been worked out, involving numerous cases, such as in the case where the student's first choice is the correct first choice and his second choice is worth no credit; when his first choice is worth one and his second choice three, etc. This is not altogether necessary, however, unless a careful record is to be kept or standards established.

After doing Questions 1 and 2, the students finish the story. On the basis of the actual outcome of the story and the well-established relationships of the character, the answers to Questions 1 and 2 are discussed.

The students then do Question 3. This involves background knowledge to a certain extent, though the student who has never heard of telling direction by relating the time of the day to the direction taken by shadows can sometimes get the correct answer.

In Question 3, the best answer is *c;* answer *e* is correct, but is not so complete. The most unsatisfactory answer is *a,* which has no logical coherence at all.

Sample Exercise 2.

The next sample exercise involves much more mature thinking than the preceding one. In this case background knowledge, social and ethical attitudes, and understanding of character are applied to the solution of a problem which arises from a story.

The story is a short story called

Grasshopper Batallions, and is from the same source as the story used in the preceding sample exercise. It deals with the struggle of Charles and Caroline to protect their wheat crop from the attack of a westward-moving army of grasshoppers. They are not yet established as farmers, are poor, have a young baby, and are depending on this crop to give them their start. The struggle against the grasshoppers is futile; the crop is completely destroyed. The student reads the whole story through before answering the questions.

Interpretive Understanding—Evaluation.

"Grasshopper Battalions"—*Adventure Bound,* p. 143. 2157 words.

1. *Charles and Caroline should have gone back to the city.*

If you agree with this statement, underline YES and check the statements under YES which can be considered sound reasons for your opinion. If you disagree with it, underline NO and check the reasons under NO. If you can't make up your mind, check the sound reasons in both columns.

YES

a. The city worker can make a better living than the dirt farmer.

b. They didn't have the qualifications to make successful farmers.

c. In the city they could get proper medical care and schooling for their child.

d. Too much of the land in this country is already under cultivation—there are too many farmers.

e. In the city they could get recreation when they were over-tired.

f. Charles was too able a man to be wasted off in the country.

g. The crop failure was typical of what they will have to face year after year—grasshoppers one year, drought another, surpluses which can't be sold when the crops are too good.

NO

a. They showed the persistence which would finally bring success.

b. If they kept on they might some day be prosperous wheat farmers.

c. In the country, people are free from the nervous strain and hustle of the city.

d. The destruction of the crops by the grasshoppers was merely a temporary set-back.

e. It was better for Charles to be poor and independent than to be tied down to working for someone else, even at much better pay.

f. The country is a healthier place to bring up children.

g. Crop failures are bound to come sometimes, but year on year there are bound to be crops.

2. *On the whole the experience with the grasshoppers was a valuable one.*

YES

a. They learned to be better prepared the next time.

b. They learned the proper methods of fighting grasshoppers.

c. The experience taught them how much they needed each other.

d. They learned a lesson of blind persistence from the irresistable westward march of the grasshoppers.

e. Hardships make success all the sweeter when it comes.

NO

a. It discouraged them—broke their morale.

b. It gave Caroline and the baby a fright from which they might not recover for a long time.

c. It set them back at least a year.

d. They had already learned how to stand up under difficulties, and though this misfortune didn't break them. it was a serious misfortune.

e. It strained their energies to the breaking-point and undermined their health.

When the student has finished the reading, he makes a choice between *Yes* or *No* of Question 1, and then checks all the reasons which support his choice. He then checks the reasons which would be most valid in support of the other choice. This process is repeated in Question 2.

Correct answer for Question 1 is *No*. *Yes* might be correct under contemporary conditions, but there is a definite inference in the story that the period is during the settling of the West. Best reasons under *No* are *a, b, g, d;* the others are more or less extraneous. The best reasons under *Yes* are *d, g;* the others are rather extraneous; *b* is erroneous.

An analysis of the reasons under *Yes* for Question 1 (the incorrect choice) will show how the writer has evaluated the answers. At the present time this evaluation and analysis are purely subjective.

a. This involves a wrong assumption as to the kind of farmer Charles intended to be, shows an ignorance of fact that farming may be a large-scale industry, producing wealth for the farmer under certain conditions.

b. This is a completely erroneous estimation of character.

c. The student who checks this is taking a good deal for granted. In relation to the human and natural forces involved, their scope and strength, this answer is also rather impertinent, even if true.

d. This is a sound reason in relation to the contemporary scene with its farm-surpluses, over-production in relation to the purchasing power of the consumer, etc. The student who checks this has brought his knowledge of contemporary conditions, or else has applied to the situation a correct logic, i. e., that this reason is fundamental, if true.

e. This is a poor choice on the same basis as *c*, except that it disregards even more fully the scope and strength of the natural forces involved—the strength of the characters, their driving motives, etc.

f. This answer shows a serious limitation in judging values, a failure to evaluate human achievement except in superficial manifestations, etc. It puts a correct estimate on Charles' character in a limited sense, but allows nothing for the natural and historical forces which have shaped him and of which he is a part.

g. This is the fundamental reason for a *Yes* answer. It correctly estimates the kind of consideration which would be pertinent—that is, whether Charles can or cannot make a success of farming. It appreciates the fact that the problem is one of victory or defeat. It assumes defeat. This is a possible assumption, its only weakness being that it also assumes certain merits for the alternative, i. e., returning to the city.

The above is merely a suggestion of the kind of ideas that might be in a student's mind in making his choice of answers. Discussion built around these answers will bring out what the student has in mind.

Sample Exercise 3.

The next exercise illustrates material of a more mature kind, to which a much more extensive interpretation is applied.

The student reads only one chapter of *Babbitt*—Chapter II—and then does the exercise. Under each of the categories the student checks *all* the statements he believes to be true. In

scoring, the writer gave a credit of three for some of the statements, a credit of one for others, no credit for some, a score of minus one for a few. For example, under *1. Babbitt's economic status, place in society, etc.*, a credit of three was given for *d, e, g, k.* A credit of one was given for *h* and *i.* A credit of minus one was given for *b.* There is no point in reproducing the whole system of crediting the answers, since the judgment of one person who was sufficiently familiar with the book would be as good as another's unless some less subjective way of scoring is determined. Scoring is of only secondary importance and the combination of answers checked is more to be considered than simply the number of right answers checked.

Interpretive Understanding.

Babbitt, p. 14, Chapter II. 3050 words.

1. *Babbitt's economic status, place in society, etc.* Check all of the following that seem to you to apply to Babbitt.

a. Factory manager.
b. Top-crust socially.
c. Travelling salesman.
d. Social climber.
e. Income above $5,000 yearly.
f. Smartest business man in Zenith.
g. Trying to keep up with the Joneses.
h. Lower middle class.
i. Content with social status.
j. Income under $2,500 yearly.
k. Real estate man.
l. Income over $25,000 yearly.
m. Professional man.
n. Makes money in shady political deals.

2. *Babbitt's early environment, schooling, etc.*

a. From a wealthy family.
b. His own family of poorer economic status than his own present status.
c. From a refined and cultured home.
d. Only a grammar school education.
e. His father was a professional man (lawyer, doctor, teacher, etc.).
f. Brought up in a careful sheltered way.
g. High school education only.
h. Graduate of Harvard with honors.
i. Graduate of a state university.
j. From a commonplace American home.
k. Home background of poverty, ill-health and brutality.
l. Parents brilliant but emotionally flighty and unstable.

3. *Babbitt's Cultural Level.*

a. Very refined, with excellent taste in such things as home furnishings.
b. Original to the point of being "arty."
c. Boorish and crude.
d. Good taste in books, but none in music or painting.
e. Commonplace but slightly pretentious taste for "the better things."
f. Scornful of everything "highbrow."
g. Undeveloped culturally.

4. *Moral character.*

a. Good to his family.
b. Very weak and easily imposed on.
c. Irritable, but not unkind.
d. Blustering but not very effective.
e. Self-indulgent, giving way to every impulse.
f. Strict with himself but lenient with others.
g. Firm and manly.
h. Not so firm and manly as he would like to appear.
i. In control of himself for everyday purposes, but weak-willed under pressure.

5. *Household and household arrangements.*

a. Expensive but commonplace.
b. Decent but dull.
c. Healthy, with fresh air, proper sanitation, clean, efficient.
d. Poor management of children.
e. An excellent home to bring up children in.
f. Extravagant and original.
g. Good household management of routine.

6. *Babbitt's intellectual development, ideas, attitudes.*

a. Inconsistent.
b. No ideas of his own—his thoughts shaped by his daily paper and his club.
c. Conservative.
d. Progressive.
e. Thinks the labor movement should be crushed.
f: Believes in the "open shop."
g. A brilliant mind but with a lot of unsound ideas.
h. Thinks America the greatest country in the world.
i. Reads everything and is full of ideas.
j. Very stupid and rattle-brained.
k. Straightforward and honest in his thinking.
l. A very subtle and penetrating mind.
m. Reactionary.
n. Believes that business men are the real creators of all progress and development.
o. Thinks labor and capital should sit down together and straighten out their differences.
p. Intelligently critical of America and of his own class.
q. Slow and plodding, but careful in his thinking. Once he reaches a conclusion, nothing can shake him.

7. *Babbitt's relations with Mrs. Babbitt.*

a. Warm and tender.
b. Finds her revolting.
c. They have a beautiful understanding of each other.
d. Indifferent to each other.
e. Feelings for each other are dulled by habit.
f. Loathe one another.
g. All pretense.
h. Afraid of her temper.
i. Still in love with her after all the years.
j. They alternate between passionate love and unreasonable anger.
k. Tired of her but wouldn't want to hurt her.
l. Uninteresting and unstimulating to each other.
m. Hateful and mean to her in return for her thought and care for him.

8. *The Author's attitude toward Babbitt and his family.*

a. Considers Babbitt typical of the best and worst in American life.
b. Finds Babbitt's humdrum life inexcusably dull and disgusting.
c. Thinks Babbitt a dead weight on society.
d. Feels sorry for Babbitt for being so dull and commonplace, but envies him his prosperity.
e. Thinks people like the Babbitts are the pillars of American society.
f. Thinks that people like the Babbitts will make it necessary for the working class to revolt to win better standards.
g. Thinks that the great bulk of American business men—represented by Babbitt—are social, philosophical, and cultural morons.
h. Thinks of Babbitt as the product of the machine age.
i. Looks upon Babbitt as a symbol of the conflict between native man and civilized restraints.
j. Looks upon Babbitt as a symbol of man's everlasting struggle for better and better things.

By way of summary it should be noted that there is a definite parallel between the word-meaning from context exercises and the exercises for interpretive understanding of reading. Both depend on processes of association and inference, on a perception of inner relationships.

The exercises for interpretive understanding of reading open up an almost unlimited field for study and experimentation. The practical possibilities of such exercises are not merely a matter of determining that greater interpretive understanding of reading can be taught by these or similar or more developed materials and methods. It will also be necessary to

determine what aspects of this kind of understanding most need to be developed. In other words, it involves consideration of the aims of education. In connection with this particular orientation in the teaching of reading, one emphasis has been on sharpening the student's acumen with the purpose of making him, as a citizen, less open to the snares of mendacious advertising and false political propaganda. This is an excellent aim, but rather too limited. Certainly, exercises of this kind *cannot* replace truthful teaching in the social studies. However, if it can be shown that such exercises accomplish the purpose of making the student more aware of the need for an interpretive and critical application of his mind to his reading, then they will be useful, either (1) for correcting specific retardation in respect to interpretive understanding, or (2) for heightening the level of reading ability in the general population, as this population develops in the schools.

These exercises, like those for word-meaning from context, proved highly interesting to the students, and in this case, also, the writer had the feeling that he was observing the students in the process of growth.

III. Estimation of Results.

At the outset various reasons were given as to why no reliable conclusions can yet be drawn from either of these classes of exercises. However, the following hypotheses can be made for the purpose of establishing lines of inquiry:

In relation to ability to determine word meaning from context:

1. Intelligence appeared to play an important part.
2. Degree of reading disability appeared to play some part, but not a determining part.

In relation to the exercises for interpretation of reading:

1. Many other factors besides intelligence seemed to play a part of such a kind that the factor of intelligence did not seem to be of determining importance.
2. Maturity and extent of experience seemed to play an important part.
3. In the case of more mature students, degree of reading disability did not seem to play an important part; in the case of younger children it did seem to play an important part. This might be due to the fact that time—in the case of these children in a very favorable environment—makes up in part for the serious limitation which a reading disability imposes on experience.

Though the exercises were not equated for difficulty, it is the writer's opinion that improvement was made from one exercise to another in many cases.

Speed of reading was recorded in connection with all the reading done for these exercises. Speed—especially among the students with the least disability in this respect—tended to be sacrificed in some degree for the sake of greater discrimination.

The suggestion has been made that exercises of the "interpretive under-

standing" type could be used as a basis for composition. This was done with one student in the case of the *Babbitt* exercise. The student took the so-called correct choices, reformulated and reorganized them into a consistent study of Irving Babbitt. The product was strikingly superior to any previous writing done by this student.

It is the writer's hope that others will make exercises and experiments along the same lines.

THE REMEDIAL READING CLASSROOM

HELEN E. DONNELLY
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Many people have curious ideas about the methods used in remedial reading classes. In order to show how an efficient remedial reading room is organized and conducted, the following questions were proposed to Miss Donnelly, who is one of New England's most effective teachers of remedial reading. During the past three summers Miss Donnelly has been a summer instructor with Dr. E. A. Betts at Oswego Normal School and at Pennsylvania State College.

1. *How are the children selected for the room?*

In June of each year the third grade children are given the Metropolitan Reading Test. They are given, too, a group intelligence test which does not involve reading. These screening tests are supplemented by a rather subjective analysis of the child's needs by his third grade teacher. After the entrance of these children to the Remedial Reading Fourth Grade room they are given several further tests, as listed under Question Four. Only in questionable situations is the Binet Test administered, and in Brookline all that testing is done by the School Psychologists' Department.

2. *What does a day's schedule consist of? What subjects and how much of each?*

In this remedial reading homeroom the pupils follow the regular fourth grade curriculum and the regular weekly time allotments as set up in the Brookline Course of Study. However, everything is centered about reading. The Social Science program, in particular, offers many opportunities for guidance in reading which the remedial reading laboratory teacher misses. Certain techniques may be used in spelling to re-inforce reading vocabulary, etc., and much work in problem-solving is carried on. All these activities offer openings for guidance in reading which the remedial reading laboratory teacher is unable to provide.

3. *What teaching may be done with the whole group together? What must be done in small groups?*

The entire group often works together for speed work on easy material, for development of skill in locating information, and for some direct building of vocabulary background and vocabulary itself. Also, in order to give the class members some feeling of unity in their work, each day we have some original exercises modeled after the "power of comprehension" exercises, which are followed by discussion by the entire class. A large chart is kept, so that children may watch their own growth, and so that

the teacher has a rather objective check on the child's relative placement. It is possible for us to receive some clerical aid in the mimeographing of materials, a rather large library of which has now been collected.

In the social science work, which is the biggest field, I think, for building correct habits of reading and study, the entire class works together in the presentation of a unit. Then the class divides into small groups for reading of materials at a wide variety of levels and for preparation of specialized assignments, reports, etc.

4. *How do you decide which people belong in which groups?*

After these children enter the remedial room they are given the Durrell-Sullivan Reading Capacity Test. During certain years the four types of Gates tests have been used. After the standardized tests are administtered, a great deal of informal testing and observation are carried on. The informal testing is done usually with a carefully-graded series of readers, and then a sampling is made of certain important skills as locating information, dictionary habits, word analysis, general comprehension, etc. As a rule, we decide what people belong to what groups by a rather careful study of all these supplementary tests and classroom observation. The groups are always kept flexible, so that if necessary a child may be transferred easily, and certainly without embarrassment to him. The groups are arranged according to *level* for the main part of their daily work, not according to types of difficulties. For example, each group follows through several types of activities in the regular group meeting each day as noted in the Group Lesson Plan.

Then, in addition, we have slightly larger group meetings two or three times a week for specific difficulties: i. e., those who need special vocabulary training, those who need word analysis, those who need easy extensive reading, etc., are working together. The same children are not necessarily working together in these groups.

5. *How are the pupil teachers trained? What cautions must be observed in handling small group work?*

Pupil teachers are selected on the basis of their qualities of leadership and power to follow directions. These pupils are instructed the day before the reading lesson as a rule, but sometimes one isn't able to plan too far ahead in such detailed work, so in that case the leaders are instructed individually before their group meetings. Then they have a period to study over their materials. Naturally, we must make certain that these pupils understand exactly what they are to do; for if they don't see a purpose in every step, and if they cannot follow through a plan logically, they are usually not very successful. An effort is made to give every child within the group an opportunity to have some responsibility as a leader at some time. In some cases the child does not have the actual qualities necessary to take full responsibility for directing a reading lesson, but that child is given certain duties of rapid flash card review, phrase work, or some other activity which gives him a share of the administrative duties.

The main caution to observe, in my mind, is, *make sure that the assign-*

ment fits the group, make sure that it is interesting to them, and make sure that it gives them training in the skills that they need. If it is not specific, it will be difficult to administer.

6. *What sorts of materials are used for teaching? How do you adjust to the various levels?*

Fortunately, a wide variety of materials are available in our school situation. We are able to borrow books of different levels which are *new* to the children. In other words, no child is re-reading materials that he failed upon last year or two years ago.

The Brookline Public Library provides us with a collection of fifty different library books every two months. These books are of a wide range of subject, interest, and difficulty. The teacher, too, brings a great many books of her collection for the use of the children. The latter books are those of particular use in the individualized assignments in social studies.

A great many of our materials are original ones, based upon some special interest of the group. Remedial teachers usually become well acquainted with the group's capacity to master new vocabulary, and so are able to prepare many of their own materials.

One technique which we found highly profitable was the preparation of easy, original plays, which might be classed even as informal conversations among a group of five or six children. Sometimes these "plays" were prepared as mastery checks on previously taught vocabulary. These plays might be justified on the basis of

1. *Interest* to the children (real people saying things).
2. Special section for individual preparation.
3. Silent reading before oral.
4. Audience situation.
5. Purposeful re-reading.
6. Creative activity.

This technique, I believe, was one of the most workable and one of the most thoroughly enjoyable ones we used last year. (See Group X activity on the enclosed lesson plan.)

Among the commercial materials used in our work last year were the *Alice and Jerry* series, the *Gates* series, the *American Education Press* pamphlets, the *Hall-McCreary* pamphlets on reading for detail and general comprehension, the *Buckingham Bookshelf,* and the occasional use of materials like Brueckner and Lewis *Remedial Reading Exercises.*

7. *Lesson Plan.*

READING GROUPS.

GROUP X.

Pupil Teacher.

1. Introductory message, silent-motivation.
2. Orientation pictures, interest and vocabulary.
3. Oral introduction by pupil teacher, and assignment of sections.
4. Silent study of parts.
5. Oral reading.
6. Discussion.
7. Organization of phrases to follow reading to check on understanding of ideas in the play or sketch.
8. Dramatization, if time.

GROUP Y.

Pupil Teacher.

1. Presentation of new vocabulary by motor visual method, discussion of meanings, etc., to precede.
2. Rapid phrase drill.
3. Introduction to silent reading lesson, reading for a definite purpose—questions to guide reading prepared by teacher.
4. Silent reading.
5. Comprehension check.

6. Discussion of comprehension checks.
7. Review of new vocabulary.
8. Free drawing of any incident in the story.

GROUP Z.

Pupil Teacher.

1. Picture introduction.
2. Presentation of new vocabulary and discussion, experiences with new vocabulary.
3. Visual memory test.
4. Rapid flash card drill.
5. Phrase cards.
6. Silent study of individual sections.
7. Audience reading.
8. Comprehension check.
9. Discussion of comprehension checks.
10. Rapid phrase drill reviewing new vocabulary in varying context.

GROUP V.

1. Presentation of new vocabulary through context.
   a. Silent exercise.
   b. Discussion.
2. Vocabulary review by flash card drill.
3. Word meaning test.
4. Silent reading, no questions set up previously.
5. Comprehension check.
6. Discussion of comprehension checks.
7. Optional.

GROUP W.

1. Vocabulary enrichment drill (anticipating meaning).
2. Auditory—phrase location.
3. Phrasing new material.
4. Introduction to new lesson and setting up purposes for silent reading.
5. Silent reading to find answers to definite questions.
6. Discussion.
7. Comprehension check.

8. *What types of faulty habits or skills are most important to care for, or most commonly in need of attention?*

My first job is to build vocabulary background for these children. Their backgrounds are, in most cases, astoundingly limited, such words as "anchor," "jewel," "meadow," "orchard," "audience," having almost no meaning for them. We do this by a great deal of discussion, and by a large amount of word-association work; much of it is oral, followed by reading. Work in word addition exercises, much work in straight drill exercises in related and unrelated word exercises, and a great deal of work in "editorial" work prove of value here. In this "editorial" work, we merely take brief paragraphs and make them more interesting by substituting words that we consider more colorful, more lifelike, more active, etc. The children enjoy this type of exercise very much.

My next job is to teach these people how to read silently. This is carried out by the general routine methods of developing comprehension exercises in silent reading, first making certain that it is interesting and of the correct level.

Some of these people need a great deal of help in word analysis. Our dictionary work is helpful here, but often we must do a large amount of supplementary analysis work to really build up this skill which is so obviously lacking in many of these remedial students.

Study habits, of course, are important in this grade. All the work here is carefully organized for our social science work, and proves rather successful.

9. *How are the groups carried on?*

All five or six groups work at the same time. The group in need of most help receives direction from the classroom teacher. The other groups are able to carry on their work under their

pupil leaders, with the more or less general supervision of the classroom teacher, who is able to observe the progress of all the lessons, if her own group's work is planned so that, during a silent activity, she is free to circulate about the room.

10. *Isn't the work noisy and confusing, when all five groups are working at once?*

Not necessarily; the noise is working noise, and therefore is not confusing. The work is usually made so challenging that the individual group hardly realizes the existence of the other groups. Then, too, in the skillful planning of the lessons, it is possible to arrange the material so that certain groups are having silent activities while other groups are carrying on their oral discussions, dramatizing their stories, or correcting their comprehension checks.

11. *How do you check their progress?*

A daily chart is kept for every individual in the room (34 in all). In this way, an objective measure of the daily work is kept. Then, too, a check of vocabulary master is kept by the vocabulary notebooks. These words, supposedly mastered, are used in our eight or ten-day inventory tests. This kind of test is the most time-consuming activity that we carry on, and perhaps the most diagnostic and valuable.

12. *What equipment is necessary—machines, diagnostic apparatus, etc.?*

The Betts telebinocular is used by the Health Department in Brookline. In general, our work tends to lean away from the instrument side, although visitors usually expect to see a great many intricate devices of some sort or other which, by some stroke from the gods, teach these children to read. One man who visited the work last year said, after observing our class: "Now you've had your reading; when do you have the *remedial work?*". He was one of those who expected magic.

We do have a lantern slide machine which we occasionally use to do a little choral reading with small groups, snapping off the light and discovering how much farther certain individuals have been able to read. We use the lantern, too, for quick-exposure exercises in word recognition and phrase work, but the making of the slides seems slow and a bit laborious, and scarcely worth the time involved. However, since the work is highly interesting to the children, we do make occasional use of this device. One may do the same types of work by much less involved methods.

13. *Is there a problem of attention or discipline in the room? How are such prevented?*

No, there is not a problem of attention or discipline in the room. When the materials are fitted to the individual's level, when each member has his own particular job to complete and to contribute to the group, when each individual is competing with his own daily record, and working on material of high interest to him, there is no disciplinary problem. Each person has too large a share of the responsibility for the success of his group. The

dignity, poise, and general directive powers of the group leaders are amazing.

14. *Do you actually get results, or is this merely a store-room for non-progressing children?*

In general, good results are obtained. (These former slow learners usually average 1½ to 2 years' gain in reading achievement during a year with Miss Donnelly.—Ed.) Occasionally one does have a non-progressing child in the group who needs special individual help but who really does not belong in a remedial reading room.

15. *Do you prefer the remedial reading homeroom to the laboratory plan?*

During the first semester of this past year I had a remedial reading laboratory in which work was carried on with small groups of children from Grades one through three, in thirty-minute periods daily. There, I think, good gains were made, but it was my opinion that that type of work was not as beneficial or satisfying to either teacher or pupil as the remedial reading home-room which I have had at all other times during my teaching, including the last semester of this year.

OLD VERSUS NEW IN PRIMARY READING

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IN spite of the hundreds of research studies in reading reported in the educational magazines there seems to be no definite answer as to the best way to teach reading in the primary grades. One might expect that with all the studies that have been made there should be some evidence that we have learned more effective ways of teaching reading during the past thirty years. The opportunity came to the writer in the spring of 1938 to compare a formerly widely used reading system, copyrighted in 1906, with a popular modern reading system bearing a copyright date of 1930.

It is difficult to select exactly the significant differences between the older reading system and the more modern system. The most obvious difference was in type of approach to word study, the older system providing a word analysis procedure based upon phonetic families, while the modern system utilized a look-and-say method of word perception, with the sole method of word analysis that of intrinsic phonics. In addition, the modern method suggested activities and enrichment, whereas the older method encouraged additional practice in the mechanics of reading.

This study arose out of the enthusiasm of a supervisor who regretted the passing of the older method of teaching reading. She regretted that she would no longer be able to obtain the readers which she had used so satisfactorily. She readily granted permission to the writer to compare the achievement of children under the old system with that of children under the new system.

Fifty children from the second grade of the town using the old system were compared with fifty children in

the same grade in a town which used the modern system. The groups were alike in almost all respects. The entrance age of the first grade of the two towns was the same. The economic status of the parents of the children seemed to be approximately equal. The groups were also equivalent in regard to the amount of time spent on reading in the classroom and in regard to supervisory emphasis on the reading program. In both towns reading was considered the most important subject in the primary grades and had been given special supervisory attention during the two years preceding the present experiment. While it is impossible to equate teachers, it was observed that the teachers were among the best of those in the two towns which had approximately equal salary schedules. The teachers in the two systems had approximately equivalent training and experience in teaching. The town using the modern system prided itself on being *progressive*, which, translated into the reading program, meant emphatically no formal instruction in phonics but emphasis on meaning enrichment and associated activities. The supervisory emphasis in the town with the older system has already been expressed.

An objective study of the two groups in regard to their capacity for reading achievement bore out the impression that the groups were very much alike. A frequency distribution table made of the chronological ages showed that the two groups were almost identical, the average age for both groups being seven years six months. Standard deviations were almost identical. The only capacity test used was the Durrell-Sullivan Reading Capacity Test, which measures the child's understanding of spoken language, both in regard to vocabulary and paragraphs. Again, the distribution of the scores showed identical profiles for the two groups, the old system group having a mean grade score of 2.5, while the modern system group had a grade score of 2.7. This slight difference in hearing comprehension in favor of the modern system group fell far short of statistical significance. The standard deviation and the range of scores in this test were also quite similar for the two groups. Four measures of reading achievement were used. The first was a group reading test which included vocabulary and paragraph comprehension. The test used for this purpose was Form A of the Durrell-Sullivan Reading Achievement Test. Since it was particularly desirable to discover the effects of the two systems on word perception habits, two individual tests were constructed for this purpose. First, seventy-five words were chosen from the Gates Vocabulary for Primary Grades, which were in addition to words common to the two basal readers. The words were arranged in approximate order of difficulty and presented to each child individually, first as a quick perception test and then as a test for word analysis. The words were flashed in the Kibbe Tachistoscope, the child being allowed approximately one-tenth of a second to see the word. If he could pronounce it at once he was given credit for the word as a sight word. If he was unable to pronounce it on the quick flash, the shutter of the tachistoscope was opened and the child was allowed to study the word to see whether he could give its name. The child's success on this test was re-

corded also. In addition to the foregoing measurement of reading, a test of spelling ability was also given. This consisted of twenty words of a difficulty suitable for the two groups.

What was found in the way of reading achievement of the old system versus the modern? Have we made educational progress comparable to that made in aviation, automobiles, or to some phases of preventive medicine? In only one of the five measures used was the modern system superior to the old one. In the understanding of reading paragraphs the modern system had a grade score of 2.6 as compared to 2.5 for the old system. However, when it is remembered that the pupils in the modern system had a reading capacity score two months above that of the pupils in the old system, even this slight superiority turns into a score for the old system.

In all the other measures the old system pupils were consistently and significantly superior to the pupils in the modern system. In the reading vocabulary test the old system pupils had a mean grade score of 2.7 as compared to 2.2 for the modern pupils. On the tachistoscope test in which we might expect the look-and-say pupils to do much better than the children who had been trained on the older word analysis system, we find that the median score for the old system was 56 words recognized at sight out of 75, as compared to 32 words for the pupils in the modern system—an average difference of 24 words in achievement of the two groups. On the analysis test the difference was even greater, the old system pupils having a score of 66 as compared to a score of 36 for the modern pupils—a difference of 30 words. Both of these differences are statistically significant, the former being 10 times its probable error and the latter 13 times its probable error. In spelling, also, we find the old system pupils being considerably higher. Their mean score was 12 out of 20 words correct, while the mean score of the modern system was 6. This difference, too, was statistically significant.

Perhaps these differences may be readily explained away. Perhaps the modern teachers failed to follow the newer reading procedure. Perhaps they spent a disproportionate amount of time on activities, too little on specific reading instruction. And then again, perhaps the modern system just isn't as good as the old system.

Of course, it may be argued that the measures used are inadequate to detect the chief differences between the two systems. It might be said that the old system develops a hatred of reading, while the new system gives the child the love of it. If this is true, reading tests given in September should show that through lack of practice, children in the old system have made no gains whatever and perhaps have lost in total reading achievement, while those children in the modern system, through their love of reading, have constant practice in the skill and therefore should show marked gain in reading achievement. We shall see. It is customary, also, for modernists, when their techniques are shown to be inefficient, to rely upon another means of escape—that of the delayed appearance of the benefits of instruction. Perhaps the superior groundwork laid by the modern system—although the

superior groundwork did not show up on the test given at this time—will yield its harvest later on.

The result of this little experiment should not be taken as another victory for the Essentialist Movement in education. The small number of children involved and the many possibilities of uncontrolled factor in the experiment make it unsafe to generalize from the results. However, it is certainly apparent that progress in reading has not made the spectacular gains that have been made in certain other fields. Certainly, if there are vast improvements in efficiency of instruction they should be revealed by other experiments, even though the present one discovered no such improvement. It is rather startling, in view of the many reading systems being produced by various publishers, and reading programs advocated by specialists, that there is no published evidence of the superiority of the modern system. There seems to be little excuse for the production of a new reading system unless it can be demonstrated that it is superior to its predecessors. Yet no publisher or author appears to feel that such proof is necessary before putting a new reading system on the market. We need to learn that change and progress are not synonymous.

A NEW METHOD OF DETERMINING CAPACITY FOR READING

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IN the study of reading failures it is desirable to know whether the failure rests on lack of mental capacity, on physical disabilities, or upon confusions in the learning process. The item of mental capacity has long been measured by the use of group tests of intelligence. Since these tests require reading ability it is evident that the child who has a serious retardation in reading is apt to make a low score on such tests even though he may possess normal or superior intelligence. Since reading is a process of interpreting written symbols, the degree of retardation in the mechanics of reading would seem best measured by comparing the reading achievement with the capacity of the individual for understanding spoken language. This article deals with the construction and use of a measure of auditory comprehension.[1]

Group tests of intelligence are notably weak for survey or diagnostic use in determining reading difficulty. Such group tests of intelligence contain many items that require reading. Some tests are so nearly parallel to tests of reading achievement that it is difficult to discover whether a test is a reading test or an intelligence test unless one looks at the title page. It is not surprising that the use of group tests of intelligence which have a preponderance of reading items tends to conceal the presence of reading difficulty. When such measures of capaci-

1 Durrell-Sullivan Reading Capacity Test, World Book Company, Yonkers-on-Hudson, New York, 1937.

ty are used, almost all cases of low achievement in reading are "explained" by a low intelligence quotient or a low mental age. The effect of reading difficulty on such intelligence measures has been reported in previous studies.

The danger of using such measures as indications of capacity for reading is more evident when individual cases are examined. One twelve-year-old child was refused admittance to the college preparatory section in high school because of three successive group test I. Q.'s below 90. The low I. Q.'s were believed to explain the low achievement in the linguistic subjects. When the child's reading difficulty was corrected, alternate forms of the same three group tests showed I. Q.'s varying between 136 and 140. Seven successive children referred for reading difficulty had group test I. Q.'s below 90 but when given the Stanford-Binet Test all obtained I. Q.'s above 115. The group tests, through a false verdict of dullness, may cover up a great many children who are really normal or bright but who need special help in reading.

The Stanford-Binet Test is a much better measure of mental capacity than is the usual group intelligence test. It has a greater variety of items and does not depend on reading to as great a degree as the group tests. It has been shown that the Binet is affected adversely approximately nine I. Q. points by reading difficulty. The chief difficulty with the Binet Test is, however, that it requires an experienced examiner and can be given only to one child at a time. It is possible, too, that the Binet Test may be too conservative a measure of language capacity.

The principle underlying the use of measures of auditory comprehension as criteria for potential reading achievement is that if the mind is able to handle auditory symbols up to a certain degree of complexity, it should be able to handle visual symbols up to that same degree of difficulty. This principle, of course, assumes a uniformity of brain structure in regard to the handling of symbolic relationships that are involved in language. This assumption seems in harmony with the findings of physiological psychology. If the child's understanding of spoken language is normal or superior for his age we are reasonably safe in assuming that he should be able to master printed language up to that same level. While results of intensive instruction in remedial classes bear out this assumption, sufficient data have not yet been obtained to substantiate entirely the generalization.

The first problem in building a measure of the understanding of spoken language is that of deciding upon a method by which the child can indicate his comprehension of the language. Since the child's auditory comprehension vocabulary is greater than his vocabularies of speech, reading, or writing, it is undesirable to measure the larger vocabulary in terms of a narrower one. Oral responses require individual testing and are, therefore, ruled out at once. Since we wish a measure by which we can determine the child's potentiality for reading, the use of printed multiple choice answers is undesirable. Because he employed this method of measuring comprehension of spoken language an earlier investigator arrived at conclusions regarding the nature of reading difficulty that are highly doubtful, if not defi-

nitely misleading. Even if the word recognition difficulties are overcome by reading the multiple choice responses aloud to the child it is difficult to avoid unconscious emphasis of the right answer. The writing vocabulary, being the most limited of the various vocabularies of children in the elementary school, probably is the least desirable method of having the child record his comprehension of spoken language. It seemed best to avoid the use of other types of vocabulary and to utilize picture choices as the measuse of comprehension. By the use of pictures it was possible to overcome the limiting effect which would have been produced by the use of speech, reading, or writing.

The use of pictures for measuring this function presented a variety of problems. Some of these problems were common to both the vocabulary and the paragraph tests while others were concerned with one test only. The use of photographs was discarded because of the marked loss of detail in reproduction in the small sizes necessary for economical test production. Line drawings were found much more suitable. The question of size of pictures also had to be studied objectively. Trial vocabulary tests were made with pictures 4 in. x 4 in., 1½ in. x 1½ in., and 1 in. x 1 in. It was found that children made equivalent scores on all sizes of pictures and that in no cases were there variations of more than three points in any child's score. Group averages were the same for all sizes, children making higher scores on the small pictures being counterbalanced by an equal number making higher scores on the larger pictures. Since the picture size seemed not significant, the smaller size of picture was used in order to facilitate economical production.

The selection of words for the vocabulary test was made in the usual manner. Approximately 300 words were chosen at random from the Thorndike Vocabulary, a suitable proportion of the words being taken from those levels which are ordinarily assigned to the grades being tested. Since the test was to be used for diagnostic purposes, a high degree of reliability was essential. At the outset it was decided that the final test should have at least nine points of raw score between grade levels, the final test being planned to contain 75 items. The 300 words selected were studied as to the possibility of picturing. One hundred and fifty words were chosen for that purpose.

After the words had been selected the next problem was that of testing the child's knowledge of the words through the use of pictures. The first task was that of balancing the parts of speech. Obviously, nouns are easier to picture than other parts of speech, and a picture test is apt to be overloaded with such words. By careful planning a strong sampling of other parts of speech was included in the tentative word list for picturing. The second task was that of condensing the test into a small size, so that it could be duplicated without prohibitive expense. The final form of the test was originally planned to contain 75 items, and if a four-choice multiple response picture test were built, it would be necessary to include 300 pictures in the vocabulary test alone. Since the paragraph comprehension test was also to use picture responses it seemed essential to cut down the number of pictures. This was done by using the

matching-type test which utilized groups of eight pictures to which five stimulus words were attached. Thus, only 120 pictures were required for the vocabulary test. The construction of the test demanded a careful selection of the non-stimulus pictures, since they were needed to serve as confusions for more than one of the stimulus pictures.

Since words have many meanings, it is essential to draw pictures which test the meaning of the word which is suited to the grade level for which the test is designed. It is necessary, then, first to estimate subjectively the meaning which should be known to the child and then to draw a picture which would illustrate that meaning. Whether the final result was satisfactory could be told only by trial with children. One hundred fifty of the original words were pictures. These pictures were then put into groups of five each and were tried out on twenty children in each grade from second through sixth. The testing at this stage was individual, each child selecting the pictures which matched the stimulus words. Two factors were noted in this testing: one was the suitability of the words chosen for each grade level, and the other was the reaction of the child to the pictures in relation to the words. Many suggestions for improving the pictures were obtained from this source.

The item validation was carried out in the group test situation by presenting the 150 words in groups of five stimulus words with eight pictures in the matching test. This preliminary form was tried out on 1200 pupils from grades two through four. The results were analyzed for per cent of passes at each grade level and the 75 items which showed the greatest sensitivity were chosen for the final standardization.

The paragraph comprehension test was constructed along lines similar to that of the vocabulary test. Twenty paragraphs were prepared for the preliminary form of this test. These were graded in difficulty from simple narrative written on a primary grade level to extremely difficult paragraphs as judged by vocabulary, sentence structure, and concept difficulties. The paragraphs were written with the idea of making them as interesting as possible to children at the various grade levels, and to include the types of material and vocabulary usually presented in the grades for which they were prepared. Factual and informational topics, as well as selections from the fields of science and history were used. The topics were designed to catch and hold the interest and attention of children, so that the test would measure comprehension of the material rather than the degree of attention which the child gave to the paragraph.

Five questions were made for each of these paragraphs. In order to measure comprehension rather than mere verbal memory, the questions were phrased in words other than those used in the paragraph. Multiple-choice picture answers were provided for each of these questions. Since the non-stimulus pictures were drawn so as to require careful discrimination on the part of the child to pick out the current picture, three-choice answers were considered adequate.

The preliminary form of the paragraph test consisted of 20 paragraphs with accompanying questions and pictures were tried out on the same 1200 children who took the hearing vocabu-

lary test. Each paragraph was read aloud to the children and the questions were asked, each child selecting the picture which best answered the question. An item analysis was made from the results of these tests. The twelve paragraphs which had the greatest sensitivity were chosen for the final test.

Since it was intended that the hearing comprehension test be used for determining the child's capacity for reading, it seemed well to build a reading achievement test paralleling the hearing comprehension test, and to standardize it on the same group of children. A reading vocabulary test and a reading paragraph test were constructed. The selection of words and of materials for the paragraphs followed the same procedures as in the hearing comprehension test. In order to secure a high degree of reliability preliminary try-outs, item validation, and the selection of materials for final standardization were carefully done. The reliability coefficient and the sensitivity of the test for different grade levels were gratifying. The reliability for the hearing vocabulary test for combined grades from three to six was .93, while the hearing paragraphs had a reliability of .90. On this same range of grades the reliability of scores from both tests combined was .95. The reliability coefficient for individual grade levels varied from .84 to .91 for the hearing vocabulary test, while the hearing paragraph test showed individual grade reliability of .78 to .86. In terms of probable error of raw score these reliability coefficients indicate approximately 2 points probable error of the raw score for the separate tests and a probable error of 3 points of raw score for the two tests combined. When it is understood that there are at least 9 points of raw score between each grade level in each of the two tests, and approximately 20 points of raw score between grade levels on the two tests combined, it is apparent that the hearing comprehension test shows a high degree of reliability.

Owing to the ease of preparing large numbers of items for try-outs so that many others could be rejected, the reading vocabulary and reading paragraph tests showed exceptionally high reliability coefficients. For all grades combined the vocabulary test had a reliability coefficient of .97 as compared to .94 for the paragraph meaning. Individual grade reliability coefficients ran from .90 to .96 for the vocabulary test and from .83 to .93 for the paragraph test. The reading achievement test, combining both the word meaning and the paragraph meaning, showed a reliability of .98 for all grades combined, with individual grade reliabilities of .94 to .96. The probable error of raw scores for vocabulary and paragraph tests was approximately 1.5 points, and for the two tests combined about 2.5 points of raw score. These tests show approximately the same differences in points of raw score between grades as did the hearing comprehension test.

The final forms of the test were standardized on approximately 6,000 children in 19 communities and 11 states. The care taken to avoid provinciality in the selection of items was such that only one complaint came on this score. One of the hearing paragraphs which told the story of a boy breaking through the ice on a pond was considered unfair to children in Texas who had no experience with ice.

Since the final form of the Reading Capacity Test has been available for

only a few months, it has been utilized in only a small number of research studies. Some of these, however, may be illuminating. Among approximately 6,000 children who were given the Reading Capacity and Reading Achievement Tests, 14.5% were found to have reading ages one or more years below their understanding of spoken language. Ninteen per cent of the boys were retarded one year or more in reading, while only 9% of the girls were similarly retarded. Five per cent of the boys were retarded two years or more, while only 2% of the girls showed this degree of retardation. Rather startling results were found in many individual cases. For example, in one fifth grade six boys were found to be reading on a second grade level, although all six had normal hearing comprehension scores. Individual cases of reading retardation of as much as six and eight years below hearing comprehension were found. The application of the test in classes for dull children also produced startling results. Among 200 children who had Stanford-Binet I. Q.'s below 80 were found to have normal hearing comprehension. Sixteen of these children were found to have hearing comprehension scores five or more years above their Stanford-Binet mental ages.

While the measure of hearing comprehension does not entirely merit the title of a reading capacity test, it is probably a more suitable measure for that purpose than is the usual intelligence test. Several obvious criticisms immediately arise. A child having either hearing or vision defects would have difficulty in taking the test. Children who have inadequate opportunities to acquire ability in hearing comprehension due to foreign speech in the home or lack of a rich language environment would be unduly handicapped on the test. However, a preliminary study of the effect of bi-lingualism on the hearing capacity test as compared to its effect on the Stanford-Binet indicates that the Stanford-Binet is affected adversely to a greater degree than is the hearing comprehension test. This is possibly due to the fact that the Stanford-Binet requires a greater facility in spoken language. In addition, there might be some criticism that the hearing comprehension is measured by the use of picture responses, whereas the reading comprehension utilizes multiple choice word responses. This should cause no serious objection, since different functions are being measured and since differences in the difficulty of the tests is taken care of by the standardization. While the test is recommended for grades three through six, experience indicates that it is a satisfactory measure for grade two as well. It is not quite difficult enough for bright sixth graders at the end of the year. A junior high school form of the Capacity Test, as well as alternative forms of the Reading Achievement Test, are now in the publisher's hands. It is hoped that the test will serve both clinical and research purposes. Its primary purpose is that of discovering in the group situation those children who need special help in reading. It should also provide a more valid accomplishment quotient study of the effectiveness of different kinds of reading programs. Since it requires only about forty minutes to administer the test,

it is a suitable substitute for the Stanford-Binet examination in the clinical situation. While it has not yet been demonstrated on a large scale that children who are retarded in reading are able to achieve in reading up to their capacity in hearing comprehension, the experience of the author with sixty children who received intensive individual instruction indicates that they are able to measure up satisfactorily.

BASIC ABILITIES IN INTERMEDIATE GRADE READING

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THERE seems to be no agreement among authors of reading textbooks and reading tests for the intermediate grades in regard to the reading abilities which should be developed in those grades. An attempt to tabulate the various abilities proposed for these grades by reading manuals and by courses of study seems to indicate an increasing multiplicity of the skills rather than a simplification of the problem. One writer lists 500 skills to be taught and perhaps several hundred more could be added from a survey of current educational publications in the field.

It is highly unlikely that there are several hundred different skills that are really necessary to reading instruction in the middle grades. The absurdity of lists of 500 or more skills can be readily pointed out. By assuming that it takes ten school days to teach each of the 500 skills we arrive at the result of a thousand school weeks or 25 school years to do the job of middle grade reading satisfactorily. Most adults who are reasonably good readers cannot recall having been put though a process of jumping the hurdles of many different kinds of reading abilities. True enough, they might be better readers if they had been put through certain kinds of special training, but certainly there have been no startling discoveries in the field of reading that should make any present-day adult regret that he was born too soon.

One thing we may expect of the present emphasis on remedial reading —especially if it keeps its feet on the ground and measures its accomplishments by actual gains in reading achievement rather than by its "character and citizenship values"—we may expect an increase in the efficiency of the learning rate of children, either through elimination of the non-essentials or through the development of more effective techniques in the individualization of instruction in relation to pupil needs. The task of the remedial teacher is concrete and specific. He must raise the level of reading achievement of these pupils two or more years in a single year. In addition to this, the doubling of learning rate must be done with children who have previously made less than normal gains. For example, if an eighth grade pupil has a fourth grade score

in reading he has been learning at half the normal rate. If we expect to get this pupil up to grade in a single year's intensive work we must achieve a rate of learning four times as great as the average child and eight times this particular pupil's previous learning rate. With this sort of problem as his daily diet the remedial teacher must try to sift the program down to its essentials.

After fifteen years of educational trouble-shooting in regular classroom and clinic the writer has made an attempt at simplification. The minimum essentials for the middle grade reading program seem to be the following:

1. Vocabulary exercises in silent reading.
2. Exercises for increasing attention and simple comprehension in silent reading.
3. Exercises for increasing the child's speed of reading.
4. Exercises for improving the child's study skills. These are broken up into three general types:
   a. Exercises for increasing thoroughness of comprehension.
   b Exercises for giving the child greater flexibility in reading.
   c. Exercises which develop associational skills — thinking while reading.
5. Exercises for improving voluntary recall. These two are divided into two categories:
   a. Exercises for improving voluntary oral recall.
   b. Exercises for improving voluntary written recall.

It will be noted at once that in these basic skills there is no recognition given to the improvement of the child's reading tastes, nor is there any great concern about attitudes, interests and emotions. While it is recognized that the chief reading failure among the graduates of our schools is failure in adequate voluntary use of reading, it is felt that these skills belong primarily to the teaching of literature and to the teaching of every other subject which demands reading. The types of motivation and the selection of material in teaching the above list of skills are carefully chosen with the view in mind of establishing permanent reading interests. However, in the remedial program it is assumed that the main task is to give the child the power to do successful school work. It is the responsibility of all teachers in all subjects to establish the permanent interests.

In grades four through six the first reading problem is that of reading vocabulary. Vocabulary troubles are the basis for all of the other types of difficulties encountered in middle grade reading. Difficulties in word recognition or in word meaning ordinarily account for inattentive reading, slow reading, poor understanding of details, failure in following directions, confusions in getting the central thought, inability to understand implications, and difficulties in oral and written recall. In order to facilitate the growth in all of these skills attention first must be paid to the problem of vocabulary. There are three general ways of taking care of the vocabulary problem. The first and most important way is to drop the level of difficulty of material to the point where the child is able to read without constant confusion in regard to the words. The second step in the process is to provide direction instruction in the difficult words the child is to encounter in the new material. This is done by scanning the material which

is to be read by the child, selecting the difficult words and teaching their meaning and their pronunciation prior to the reading. A corollary of this work is the teaching of the use of the dictionary, both for pronunciation and for meaning of words. An important part of the dictionary training is to teach the child to find the words quickly. The third step in the process is teaching the transfer skills for vocabulary growth through extensive reading. The first of these habits to engender is that of discovering unknown words, while the second is that of getting meaning from context. The seriousness of the disabilities in these two skills is pointed out in Miss Elivian's article in this issue of *Education*. Another transfer skill that possibly has value in remedial reading is that of recognition of word roots accompanied by the exercises for deriving various forms of words containing the more common roots. However, in remedial programs this is more often done in connection with spelling than with reading. It is very easy to get excited over the vocabulary work and to devote too much of the class time to it. Too much attention to vocabulary may lead to two undesirable habits, slow reading and inattentive reading. In other words, the child pays so much attention to the trees that he not only fails to see the woods but he also is a long time getting through them.

After vocabulary, the most common difficulty in the middle grades is inattention to context. Almost every adult knows the feeling of suddenly awakening to discover that his mind left off several paragraphs or even several pages back. This habit of inattention becomes severe and chronic with many children—so much so that their minds wander at the end of a single sentence and often at the end of the first phrase of a sentence. Of course, the best way to overcome this difficulty is to increase the motivation by giving more interesting reading or by heightening the purpose by making the reading part of an important project which he is to carry out. If the habit of inattention persists in spite of the heightened motivation, then one may give the child lists of questions which parallel the paragraphs that he is to read. The child first reads the question, then finds the answer in the paragraph. In very severe cases several questions may be required for a single paragraph. As the child overcomes his inattention difficulty fewer questions may be used. Still later, one may reverse the order of presentation of the questions, having the question follow the reading. Some teachers find it wise to place the question directly in the context, so that if the child is inattentive he will awaken when he bumps into the question. The general rule in all grade reading is to give the child the assignment prior to the reading. There seems to be no excuse for having the study questions at the end of the chapter. If they are to be useful at all they should be discussed prior to the reading.

Ordinarily, the improvement of reading speed is one of the simplest tasks of the teacher. There have been few experiments in the field of reading so badly conducted that gains in reading speed were not reported. Almost any program which involves the testing of the child's speed of reading at least twice a week seems to produce

rapid gains in this ability. Certain rules should be followed, however, in carrying out these speed tests. In the first place, the material read should be at the right level and of the right type for speeded exercises. Simple narrative is the best for this purpose. The reading test should be short—not more than two or three minutes in length. Two minutes is a long time for a child to work under pressure, particularly if he tends to any form of nervousness. Speed tests should always be followed by simple questions to measure the child's comprehension, otherwise phenomenal speed will be shown by the more adventurous spirits in the later tests. Speed is recorded by having the child check the number of words he has read at the end of two minutes, or by having the child read the entire exercises and record the time at which he finishes. Records should be made of the child's speed of reading, and if the materials for the various speed tests are roughly equivalent, the child's growth in speed of reading will serve to encourage him to greater effort.

Under the heading of study skills there are three separate divisions. The first category, thorough reading, includes most of the titles commonly listed under study skills. Such things as following directions, noting details, ability to select major and minor topics, the organization of ideas, etc., are merely steps in the development of the child's ability to understand clearly what the author has written. Goodykoontz[1] has suggested a series of steps which include most of these abilities. We generally abridge her eighteen steps by using the following exercises:

1. Matching headlines and paragraphs.
2. Discovering topic sentences.
3. Selecting the best summaries.
4. Classifying major and minor ideas.
5. Developing the word outline or idea line.
6. Oral and written reproduction of materials from these idea lines.

There are several variations and additions to this program. The chief thing is to see that the materials are graded carefully and that the child is successful in each of the various steps. If this is done it will be found that the child will be able to read and remember detailed and difficult material.

In establishing the child's ability to do thorough-type reading unfortunate results may be brought about unless care is taken to prevent them. The thorough-type exercises may also produce slow and slavish reading. The attention to detail and to the order and importance of ideas presented may make the child not only a very slow reader, but also a reader who is so lost in the problem of remembering what the author has said that he will be unable to think about it at all—unable to criticize, to note its implications, or to evaluate it in any way.

The speed exercises may be sufficient in themselves to offset the slow reading induced by the thorough-type study exercises. In addition, however, exercises to help the child scan to locate certain specific information will bring about the desired flexibility in reading. The scanning exercises, too, are graded. First, the child is presented with questions to which the answers are proper names or dates which are easily located. The time required for answering the five or six questions is

1 Goodykoontz, Bess, "Teaching Pupils to Organize What They Read." Elementary English Review, April, 1930.

recorded. The next level is that in which the phrases in the questions are the same as those contained in the answer. These, too, the child will be able to find very quickly. Another level of scanning is obtained by having the question and the answer expressed in quite different words, so the child will scan for the ideas. Other exercises, such as sorting, classifying, and selecting and rejecting will help the flexibility of the child.

While the foregoing skills seem to be all that is necessary for success in the average educational program, more attention should be paid to the associational skills. If a child is to find reading a useful tool for his social and business life he must be taught to find the applications for his reading. Too many people use reading as escape from reality—a substitute for daydreaming. Reading becomes a succession of motion picture shows, each unrelated to the other and unrelated to anything else in the world. Assignments can be made which will make the child relate his reading to the world and to many of his activities. Some of the assignments for associational reading are as follows:

1. Reading to think of new illustrations of the author's point.
2. Finding exceptions to the author's point.
3. Drawing generalizations from reading.
4. Reading to discover activities which might be carried out.
5. Reading to discover topics for further study.
6. Reading to criticize form and style.

In addition to these study skills it is sometimes desirable to give the child exercises in the use of the table of contents and the use of standard reference materials. However, since these vary in relation to the subject-matter being taught and the type of teaching in the classroom, ordinarily these skills are left to the classroom teacher of each subject to work out for himself.

The final skills to be taught in the program are those of oral and written recall of materials read. It will be often found that in spite of the high scores that the child obtains on standard tests, his classroom work is poor. This is usually due to the fact that the child's intake of ideas is fairly satisfactory but his recall is on the low level of identification of answers, so that while he is able to do satisfactory work on multiple-choice or true-false tests, he is quite unable to tell the story either orally or in writing. In many cases it will be found that a child is fairly fluent in oral reproduction of ideas, but quite blocked when he attempts to write. To overcome the difficulty, the "idea lines" which have been produced in the thorough-type reading are given to the child as notes from which he writes or recites. Again, there are graded steps in the use of the outline in giving the child skill in oral and written recall. At first he is allowed to use the entire outline, and then he is allowed to use only the main topics, being expected to remember the minor topics by himself. The idea line, or simple outline, is also used in the writing of original compositions.

Individual differences must be kept in mind when the above program is applied to the classroom situation. Preliminary informal testing in each of the abilities will reveal that some children need no formal instruction in any of them. Others will have special

weaknesses and will need only the appropriate exercises. Some will be deficient in all abilities and will require a complete program. Occasionally children will be found who are deficient in primary grade abilities of simple word analysis, word recognition, phrasing, etc., and these are best handled in the special remedial classroom. Rate of master of the abilities will also vary to the extent that one child may be excused from further work after two or three exercises, while another will need a longer program of carefully graded lessons. The article by Miss Donnelly in this issue of *Education* shows the usual method of adapting the instruction to the needs of various groups.

Some people possessed of higher literary spirits will find this attempt at simplification of the processes unduly complex. Their answer to the problem of poor reading is burdened with the words, "joy," "love," "enrichment," "inner urges," and "readiness,"—only give the desire and reading will burst forth. Motivation *is* extremely important, and no reading program will be successful that does not include the establishment of purpose, provision for special interests, knowledge of progress, variety of activities, and belief in one's ultimate success. However, a reading program which consists primarily of sighing and glowing and general joy is likely to result in a solo flight of the teacher, with the passengers left behind.

A graded program of instruction in specific abilities is essential for slow learners. While many individual cases can be cited to show the efficiency of the program outlined, more convincing evidence can be found in such reading programs as that of Seamans and Deal,[2] who were able to raise the reading level of 206 pupils more than three years in a single school year by informal analyses of need and intensive instructional efforts.

2 Deal, Ada B., and Seamans, Albert, "Group Remedial Reading in High School." English Journal, May, 1937.

WORD PERCEPTION AND WORD MEANING IN SILENT READING IN THE INTERMEDIATE GRADES

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EDUCATORS have been given to understand that extensive reading makes for gains in vocabulary, but just what these gains amount to has not been determined at the present time.[1] Merely assuring oneself that a child reads widely does not mean that he will gain significantly. We have hoped that this was the case and that they were increasing their ability with words and learning new meanings for them. However, "With the child who reads well and widely this learning takes place with very little help from the teacher, but with the average child, the teacher's program of instruction is essential to the acquisition of a rich vocabulary."[2] A child's habits of attention, his previous experience, his home background, his mental age, his reading age, and many other things all may influence the success that he will attain in the way of expanded word knowledge through wide reading.

"We do not know how many practices are necessary before a word encountered in reading becomes fixed in a child's vocabulary, nor do we know how long it remains in his reading vocabulary before it makes the transition into his speaking vocabulary. We do not know what skills are necessary to the best teaching of a new word. We know little of the types of errors and little of the best ways of presenting new words. In any of the intermediate grades there can be expected to be a difference in vocabulary of about four years. Since the textbooks for intermediate grades have no standardized vocabulary, it is impossible to predict which and how many difficult words a child will encounter while reading a book."[3]

Sullivan[4] found little agreement between the list she compiled based on some of the intermediate grade readers in common use and the lists by Thorndike, Gates, and Buckingham-Dolch.

Various studies have been made in vocabulary and many articles written. Dolch[5] made a study and Tilly[6] made one which seemed to show that children are able to recognize unknown words in their reading matter. In the Dolch study seventy words were given to forty sixth-grade children with the instructions that they were to circle any word the meaning of which they were not sure. They were given a test

1 Durrell, D. D., and Sullivan, H. B., "Vocabulary Instruction in the Intermediate Grades," Elementary English Review, April-May, 1938.
2 Cunningham, Ruth A., "Vocabulary Growth in the Intermediate Grades," Elementary English Review, 11: 130-32, May, 1934.
3 Durrell, D. D., and Sullivan, H. B., "Vocabulary Instruction in the Intermediate Grades." Op. cit.
4 Ibid.
5 Dolch, E. W., "Testing Word Difficulty," Journal of Educational Research, 26: 22-7, September, 1932.
6 Tilley, H. C., "A Technique for Determining the Relative Difficulty of Word Meanings Among Elementary School Children." Journal of Experimental Education, 5: 61-4, September, 1936.

over these words and it was found that they did not know the meanings of the words that they said they did not know. In the Tilly study paragraphs were chosen from the regular textbook materials and they were instructed to list the words that they did not know. He got a list of 300 words and from this list constructed a multiple-choice test and found that they did not know the words that they said they did not know.

Vocabulary plays an important part in the tests that are given to children. In most of the tests of vocabulary one meaning is given. The child may know several other meanings than the one specified in the test and still not know the particular one asked for. Thus he is penalized. Snedden[7] has worked out an interview technique which utilizes vocabulary for making an estimate of a person's intelligence. Johnson O'Connor[8] uses a vocabulary test and places much stress on the importance of it in his Human Engineering Laboratory. Nair,[9] Holmes,[10] and McKee[11] give suggestions as to ways in which vocabulary can be developed. Many studies have been made of the vocabulary peculiar to the social sciences. O'Shea[12] made a study of the effect of interest on vocabulary development. Haefner[13] found that adults above average in intelligence get meanings for a few words casually —four out of twenty was the number found in his study.

The major questions considered in the present study were:

Do the children recognize the words in their reading that they do not know?

To what extent do children get meanings from the context?

Are boys or girls better able to gain meanings from context?

To what extent is this matter of recognizing unknown words influenced by reading achievement?

How much repetition is necessary to get children to get meanings from the context?

Since the problem here was to find whether or not children are able to get meanings of words from the context the materials for this work were built with special care directed toward the word being defined in the stories in such a way that the children would have them.

Seventy-three words were chosen at random from the list for the intermediate grades compiled by Sullivan.[14] The vocabulary load was focused at the sixth-grade level, the harder words being chosen. A few that were not on the list, but were of a low frequency on the Thorndike[15] list were used to try to be sure that there would be some

7 Snedden, D. S., "A Study of Disguised Intelligence Tests." Contributions to Education, 291, Bureau of Publications, Teachers College, Columbia University, New York City.
8 O'Connor, Johnson, "English Vocabulary Builder." Human Engineering Laboratory, Hoboken, New Jersey.
9 Nair, Bertha V., "Means of Developing Word Consciousness." Elementary English Review, 11: 125, May, 1934.
10 Holmes, Eleanor, "Vocabulary Instruction in Reading." Elementary English Review, 1: 103-5, April, 1934.
11 McKee, Paul, "Reading and Literature in the Elementary School." Houghton Mifflin Co. 1934.
12 O'Shea, Harriet E., "A Study of the Effect of the Interest of a Passage on the Learning Vocabulary." Contributions to Education, No. 351, Teacher's College, Columbia University, New York City.
13 Haefner, Ralph, "Learning of Word Meanings." Journal of Educational Research, 25: 267-77, April, 1932.
14 Durrell, D. D., and Sullivan, H. B., "Vocabulary Instruction in the Intermediate Grades." Op. cit.
15 Thorndike, E. L., "A Teacher's Word Book." Bureau of Publications, Teachers College, Columbia University, New York City.

words that all the children would not know before they did the reading. The words chosen were then checked on the Buckingham-Dolch[16] list and the Thorndike list.

These words were then written into stories, four subjects being chosen that were thought to be of interest to the children of the fifth and sixth grades. Each stimulus word was then carefully defined in the context: some by the direct method of definition, some by synonym, and others by repeated use throughout the story, their meanings to be gained by inference.

Since the matching type of exercise was found to be a little more reliable than the other types of vocabulary test[17] these words were grouped for matching tests. Eight to ten words were used in a group in order to avoid confusion on the part of the children, and ten to twelve definitions were used to make for less guessing.

The stories to be read were introduced to the children and they were allowed a few minutes for discussion. They were given mimeographed copies of the story with instructions that they were to record any words the meanings of which they were not sure, as they read. Lines were drawn along the right side of the paper for this purpose. There was no time limit on the reading. All finished in from thirty to forty-five minutes.

When this was finished they were given a copy of the matching exercise numbered I and told to match the words with the definitions. They were not permitted to refer to the story while doing this exercise.

When this was finished they were given another copy of the matching exercise. This was numbered II and was an exact duplicate of the previous one. The children were instructed to read the story to find the meanings of any words that they did not know. Otherwise they were to proceed exactly as before.

16 Buckingham, B. R., and Dolch, E. W., "A Combined Word List." Ginn and Co., 1936.
17 Kelley, V. H., "An Experimental Study of Certain Techniques for Testing Word Meanings." University of Iowa Studies in Education, 1934.

PORTION OF ONE OF THE PARAGRAPHS, SHOWING HOW THEY WERE BUILT

ELIVIAN, 1938

Name..... Grade..... Date.....

GHOST SHIPS

In many nautical stories, or stories written about ships, you read that the crew of a sinking ship leaves her before it is certain that the danger which threatens is really serious. After the storm is over, these stories say that these vessels drift along with the ocean currents for as many as four of five months without a single person aboard. One has been known to have been adrift for four years. These derelict ships are even more dangerous than the great numbers of icebergs that infest the northern and southern seas. They have been found .....

floating in all parts of the ocean. Most derelicts are found in the Atlantic Ocean, although some are found in other waters. Many of them are loaded with lumber and have become so water-logged, or water-soaked, that they are really awash. When one of these ships with her decks almost level with the water is drifting in the path of ships sailing across the ocean, they .....

PART OF ONE OF THE MATCHING EXERCISES

Name..... Grade..... Date.....

.....	adrift
.....	awash
.....	collide
.....	combustible
.....	current
.....	davits
.....	elusive
.....	occupant

1. General movement of anything.
2. Abandoned or deserted.
3. Drifting about without being anchored.
4. Any of fresh or salt water fish.
5. Level with or just above the surface of the water.
6. To think up or to plan.
7. To crash or come together with great force.
8. Apt to catch fire; easily burned.
9. Skillful in escaping; slips away to keep from being captured.
10. A pair of posts or arms used on ships for raising or lowering small boats.
11. One who uses a place for living quarters; a tenant or rented.

No attempt was made to explain the tests to the children. They were rotated with seventy-two of the children to find if possible what degree of learning took place in the giving of the four tests. Papers from 126 fifth and sixth grade children were used. Sixty-eight of the cases were boys and fifty-eight were girls. Some of them were of foreign parentage. The Gates-Huber Reading Series was in use as the basic text in reading.

The reading age, mental age, and the chronological age scores for the children were obtained from the office of the school psychologist. Test scores are based on the Gates Reading Tests and the Kuhlman-Anderson Test of Intelligence.

The children were divided into five groups on the basis of their reading ages. Group A was reading of the eighth grade level and above, Group B on the seventh grade level, Group C on the sixth grade level, Group D on the fifth grade level, and Group E on the fourth grade level and below.

The average number of words discovered by the whole group of 126 children was 13.87 $\pm$ .16. This is 19% of the words on the stimulus list. In doing the matching exercise to find whether these words were really unknown, the average score was 36.61-$\pm$

.18. This left 36.39 words still unknown and shows that only 38.11% of the unknown words were discovered. The average on the test where they read to find the meanings of the words in the context was 43.67 ± .20. This leaves 29.33 words on the list for which they were unable to find the meanings. However, they did gain 19.4% or 7.06 words when they read for the meanings from the context.

The children reading on the eighth grade level and above made the highest scores on all the tests. The average number of words discovered by these children was 10.75 ± .24. This is 14% of the stimulus words. On the first matching exercise the average was 50.85 ± .28 or 69% of the stimulus words. However, since they failed to get the meanings of 22.15 words, this is only 48% of the words that they said they knew. When they read for the meanings from the context they made an average score of 62.39 ± .27. This left 10.6 words still unknown, but showed a gain of 11.55 words or 52.2% of the meanings that they were able to get from the context.

The lowest group had a reading age of 10 years and 4 months and were reading on a grade four level and below. The average number of words said by this group to be unknown was 14.7 ± .16 which is 20% of the stimulus words. The average score on the first matching test was 22.66 ± .38. This is 29.3% of the words they thought they knew. In reading to get the meanings from the story they made a score of 28.25 ± .36, a gain of 5.48 words, but there were still 44.75 words that were unknown. They gained only 10.9% by reading for the meanings of the words.

While these findings would indicate that the higher the reading age or attainment of the student the greater his ability in gaining meanings of words from context, and that as the attainment in reading drops lower the ability to get the meanings is also lower, it still shows that even with children whose reading achievement is high, there is a need for some plan of directed study of the meanings of words if they are to be made to function as a part of the vocabulary of the children.

Summary and Conclusions

The purpose of this study was:

1. To find whether children recognize words they do not know.
2. To find whether children can gain meanings from context.
3. To find what sex differences there are in the ability to find unknown words and to find the meanings in context.
4. To find the relation of these abilities to the different levels of reading achievement.
5. To find what amount of growth takes place in the giving of four practice tests.

Tests were constructed to measure these abilities. The application of these tests to 126 children in the fifth and sixth grades resulted in the following analysis:

1. Children were generally unable to recognize words they did not know. Of the words missed on the word-difficulty test, only 41% were discovered in the preliminary reading.
2. There was a slight improvement in the ability to discover unknown words in groups of high reading ability. The grade four group dis-

covered 29% of the unknown words, while these reading on the grade eight level discovered 48%.

3. Ability to use context definitions to derive word meanings is not well developed. The meanings of 22% of the unknown words were discovered in the context.

4. The ability to use context to derive meanings improved markedly with reading ability. The group reading on the eighth grade level discovered 52% of the meanings, while the grade four group discovered only 22% of the meanings.

5. Sex differences in these abilities were very slight. The girls were superior to the boys in ability to discover unknown words.

6. The amount of improvement in four practice tests was negligible for each of the skills tested.

DEPARTMENT OF ADULT EDUCATION

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THE ADULT EDUCATION COUNCIL *of* GREATER BOSTON

JULIA SHEEHAN, Editorial Secretary, 217 State House, Boston, Massachusetts

PARENT EDUCATION IN NEWTON, MASSACHUSETTS

JULIUS WARREN
SUPERINTENDENT OF SCHOOLS, NEWTON, MASSACHUSETTS

IT is only within comparatively recent years that much thought has been given to the idea of education for the job of parenthood. Instead, education has been almost entirely directed toward the training of children. Dr. Mark May of Yale University in a recent study, contrary to general public opinion, found the mother, not the classroom teacher, to be the most influential educational agent in the child's environment. If this is true, it becomes self-evident that those who educate in the home should be as well, if not better equipped for their jobs than the teacher whose influence is secondary.

When the child enters school, his education is well on its way; his patterns of behavior are so well established that it is only with the closest coöperation of home and school that undesirable patterns can be changed, or that desirable new patterns can be formed. The community is then faced with the question of when the education of parents should begin and whose concern it should be. Those concerned with the physical well-being of the child have, over a period of years, realized that the education of the mother for the physical care of the new baby begins not when, but before the child is born, and many mothers today are indebted to the doctor and the nurse for their knowledge of early care and

habit training. This concern of doctor and nurse for the education of parents to an understanding of their responsibility in the physical and mental health of the child has grown to such proportions that public health officers are gradually extending their programs to include the education of the community on matters of public health.

The school, too, is realizing the importance of the training which precedes entrance to school. It is increasingly concerned with the education of parents, and through contacts with parents of children of kindergarten age has attempted not only to help mothers and fathers in their child-training problems but to inform itself of home influences which will have a direct bearing on the child's school conduct. The nursery school is making its contribution to parent education.

Not only is better parental understanding important in the early life of the child, such understanding of the educational process is important throughout the entire growth period. School organization, content, and method change in the light of increasing information as to how children learn, and with the rapidly changing social and economic conditions within our communities. Advance, change, and improvement in any given school system actually do not go very far in practice unless the community itself has had a part in the thinking which results in changed school procedure. Schools tend to be as good or as mediocre as the people of the community demand that they shall be. Only through a better understanding of education does the community give support and backing to an enlightened and sound program of education.

During the past two years, the Newton School Department has been working to develop a program of better *adult education about education.* The first step in this program was worked out by the Director of Elementary Education in coöperation with the City Health Department and the Nursery School teachers of the city in the issuance of an extremely helpful booklet "Guide to Parents of Very Young Children." This has had a wide circulation among parents of young children throughout the city. This first booklet was followed by a series of bulletins to parents on the problems faced by the child as he enters upon the more difficult tasks of acquiring the fundamental tools of learning, "Pre-Primary Classes," this time under the authorship of the Director of Elementary Education, the School Psychologist, and Pre-Primary teachers. A third step was brought about with the publication early in September, 1937, of the attractive bulletin under the joint authorship and sponsorship of the Department of Health and the School Department, "Looking Forward to School Entrance."

Late in the spring of 1937 a group of parents, the teacher of Handicapped Children, members of the Administrative Staff, the Director of the City Board of Health, and the Consultant in Parent Education from the Division of Child Hygiene of the State Department of Health, met in the office of the School Department to plan an Evening Course in Parent Education. The combination of these agencies concerned with public welfare was in itself an achievement and has re-

sulted in a three-year program which is reaching many homes in Newton as well as the teachers and the schools.

The main emphasis in this three-year program is the consideration of the child as a growing, maturing individual, whose behavior patterns at any age are conditioned by all his previous experience and by many environmental factors over which the home has little or no control. Only when the school, which must take the position of leadership in childhood education, can focus the attention of other community agencies on the importance of their function in the education of children, can there be any degree of assurance that well-adjusted personalities will result.

The speakers who participated in the 1937 program are recognized leaders in the fields of education and public health, who, because of their interest in the venture, gave their services without cost to the city.

The subject for consideration in the 1939 series will be The Adolescent Child. The programs for the 1937 and 1938 courses follow:

PROGRAM, 1937-1938.

THE CHILD BEFORE HE ENTERS SCHOOL
HIS PHYSICAL AND MENTAL HEALTH

October 11

Topic—The Function of the Home in the Life of the Child.
Speaker—Mrs. T. Grafton Abbott, Consultant in Parent Education, Division of Child Hygiene, State Department of Public Health.

October 18

Topic—Early Habit Training and Its Relation to Later Life.
Speaker—Dr. Olive Cooper, Division of Mental Hygiene, Massachusetts Department of Mental Diseases.

October 25

Topic—The Meaning of Discipline in the Life of the Child.
Speaker—Mrs. T. Grafton Abbott.

November 1

Topic—Parents and Sex Education.
Speaker—Dr. Helen I. D. McGillicuddy, Educational Secretary, Massachusetts Society for Social Hygiene.

November 8

Topic—Keeping the Well Child Well—Health Standards.
Speaker—Dr. Susan Coffin, Consultant in Child Hygeine, Massachusetts Department of Public Health.

November 15

Topic—The Detection and Prevention of Communicable Diseases.
Speaker—Dr. Edwin Place, Physician in Chief, South Department, Boston City Hospital.

November 22

Topic—Dental Health.
Speaker—Dr. Leroy M. S. Miner, Dean, Harvard Dental School.

November 29

Topic—Beefsteak on Your Budget.
Speaker—Miss Dorothea Nicoll, Nutritionist, Masachusetts Department of Public Health.

December 6

Topic—The Emotional Life of the Child.
Speaker—Dr. Clarence Bonner, Superintendent, Danvers State Hospital.

December 13

Topic—The Meaning of Play in the Life of the Child.
Speaker—Dr. Abigail Eliot, Director, Nursery Training School of Boston.

December 20

Topic—Looking Ahead to School Entrance.
Speaker—Dr. Lura Oak, Head of Research Learning Project, Massachusetts Department of Public Health.

PROGRAM, 1938-1939

THE ELEMENTARY SCHOOL CHILD—
SAFEGUARDING THE CHILD'S SECURITY
IN A WORLD OF CONFLICT.

October 3

Topic—The Parents' Part — Understanding Ourselves.

Speaker—Dr. Mariana Taylor, Psychiatric Clinic, Massachusetts General Hospital.

October 10

Topic—The Nature and Needs of the Child—The Child from 5 to 9.

Speaker—Dr. Lura Oak, Massachusetts Department of Public Health.

October 17

Topic—The Nature and Needs of the Child from 9 to 12.

Speaker—Dr. W. Linwood Chase, Headmaster, Country Day School, Newton, Massachusetts.

October 24

Topic—Protecting the Physical Health of the Growing Child.

Speaker—To be selected.

October 31

Topic—Meeting the Needs of the Growing Child in the Home.

Speaker—Mrs. T. Grafton Abbott, Consultant in Parent Education, State Department of Public Health.

November 7

Topic—Meeting the Needs of the Growing Child in the Church.

Speaker—Dr. Howard Kellert, St. Paul's Cathedral, Boston, Massachusetts.

November 14

Topic—Meeting the Needs of the Growing Child in the Community.

Speaker—Mrs. Eva Whiting White, Director of Peabody Home, Boston.

November 21

Topic—Meeting the Needs of the Growing Child in the School.

Speaker—Dr. Bessie Lee Gambrill, Professor of Elementary Education, Yale University.

November 28

Topic—Creative Experience in the Life of the Child.

Speakers—*Art*—Miss Margaret Ritchie, Roosevelt High School, Yonkers, New York. *Music*—Miss Beatrice Spaulding, Nursery Training School, Boston. *Rhythmic Expression*—Miss Ruth Evans, Assistant Supervisor of Physical Education, Springfield, Massachusetts.

December 4

Topic—Further Creative Experience in the Life of the Child.

Speakers—Symposium of Teachers.

December 11

Topic—Evaluation and Summary Meeting.

Speakers—Mr. W. V. M. Fawcett, Newton; Mrs. Helen G. Stevens, Parent Education Worker; Mr. G. Winthrop Brainerd, Principal, Elementary School; Miss Grace Lawrence, Supervisor Public Health Nursing.

An evaluation of such a series of parent education lectures can at best be only a superficial one. There has been no reliable means of checking its influence on parents' attitudes toward their children, on types of experience which they are providing for them, or on the physical care they are giving them.

Of parents' interest in the subject of early child development there can be no question since at every lecture there were from three hundred to six hundred in attendance and a large proportion of that number attended all meetings of the series. This carry-over of interest was evident also in the small group meetings which were an immediate outgrowth of the lecture series. The questions raised in these meetings gave some indication of the value of the course to this group of people. Their desire to "carry on" was evidence of the fact that many questions were still unanswered, that they found the type of meeting satisfying in getting at these unanswered questions, and that they had been stimulated to further study.

The values of the course from the standpoint of the school probably are of the following nature:

1. The attention of teachers as well as of parents was focused on development in the pre-school years thus giving a clearer understanding of how

emotional, social, intellectual and physical behavior patterns originate.

2. Questions were raised and discussed which were of mutual concern to parents, teachers, and others working with young children.

3. The questions raised by parents gave school workers insight into family problems which affect the feeling of security of the child. Parents' insecurity in handling what often times appears to be a trivial problem causes insecurity in children.

4. It directed attention to the far-reaching interest of the community in children. The work of many community agencies was described in the lectures.

5. Representatives of many agencies working in the field of child development were brought together.

6. The lectures, because of the authority of the speakers brought to the audience the leading present day thought in the field of child development.

7. Many leads were given for helping parents to look at problems objectively. One job of the school is to gain the cooperation of parents in helping children solve their problems.

8. Many helpful suggestions were given for detecting symptoms of unusual child behavior.

9. Such a course serves as one unifying factor in providing a community program of education for child growth.

10. The discussions focused attention on the importance of training in the pre-school years and the influence of early patterns of behavior on behavior in later years.

11. Many suggestions were made of sources to which teachers may turn in planning their own programs for young children. (Bibliographies were especially helpful.)

12. The discussions of adult behavior and its influence on child behavior threw light on many problems growing out of teacher-child relationships.

13. Parent leadership was brought to light. This is important from the standpoint of planning further for parent education.

14. "The General Principles of Child Guidance" which are inserted here were developed by the small discussion group and may serve as guiding principles for the teachers as well as for parents:

a. Make fewer and better-considered requirements for obedience, and enforce them consistently.

b. Incorporate into a well-planned daily routine much of what is going to be expected of a child; he will accept it cheerfully if you hold yourself to it also.

c. Build health and the sense of security by the regularity and rhythm of a well-balanced daily program.

d. Have the child finish routine matters and then allow him to play with a minimum of interruption and dictation.

e. Be glad that the child concentrates on his own activities, and give him warning when possible before the time when he must stop.

f. Recognize the importance of a child's play, and change his play materials to fit his individual and maturing needs.

g. Plan fairly constant supervision of the young child until he has built up some dependable standards of good behavior.

h. Allow a child to make his own decisions in all situations where he may be allowed to take full responsibility for the outcome.

i. Teach respect for personal property by allowing the child rights of ownership in his belongings and the feeling that he has a share in the cherished things of his home.

j. Teach tolerance by the sincerity of your own attitude.

k. Teach truthfulness by your own care never to equivocate and by helping the young child to distinguish fantasy from fact.

l. Encourage naturalness of self-expression to develop poise and pleasing manners; do not emphasize an artificial behavior.

m. Laugh with children, not at them.

n. Do everything possible to give a child satisfactory companionship at his own age level, in order to develop confidence in himself and right attitudes toward others.

o. Give the child with physical or emotional needs special attention, but with care not to foster dependency.

p. Give your child adequate sex education from earliest childhood, as a progressive process looking toward a well-adjusted life.

q. Avoid many behavior difficulties by preventing fatigue and by training in relaxation.

r. Avoid temper tantrums and negativism by giving thought to your refusals and commands.

s. Help the child to good behavior by your foresight and self-control, and rely less on punishment following bad behavior.

t. Teach coöperation and understanding from earliest years as the foundation of satisfactory family and communal life.

u. The forming of desirable habits must begin at birth.

v. Each day of the child's life, habits become more fixed.

w. Regularity and encouragement are necessary factors in the promotion of desirable health habits.

x. Parents can best prepare the child for school entrance by meeting his needs at each age level and thus developing a happy, healthy individual who is ready for each new step in his experience.

DEPARTMENT OF BOOK REVIEWS

Flying the Printways — Experience Through Reading. By *Carol Hovious.* 525 pages. Published by D. C. Heath and Company, Boston. 1938. $1.40.

Many teachers interested in the teaching of reading will remember the author's *Following Printed Trails. Flying the Printways* is an easier book, designed chiefly for the seventh and eighth grades. The author, who is Head of the English Department of the San Benito County High School and Junior College, is well-known as a specialist in the teaching of reading. She has designed her book to help the student who has special reading difficulty and to improve the reading ability of all pupils.

The material has been class-tested in various California schools. The selections, all chosen for reader-interest, vary in length from 1500 to 4500 words. There is a manual of instructions for the teacher and a test book containing the answers to the objective tests. The book is pleasing in form; the type is good; and there are fifty well-chosen illustrations. English teachers and supervisors of English will undoubtedly welcome the wealth of material found in this attractive new book on reading.

Story of Instruction—The Church, the Renaissances and the Reformations. By *E. C. Moore.* Macmillan. 1938.

This is not another textbook in the history of education, or of instruction. In fact, it is much less a history of education than a history of thought.

It is a salutary thing to bring the history of education into intimate relationship with the thought and life of the times; but this book is a history of thought with (often) obscure or indirect reference to the process of education. If the book was intended to be only a story of instruction, the development of education through the years is clouded with a mass of data having little direct bearing upon it.

It is a question if in a history of instruction an author needs to go into such matters as the heretical sects of Christianity. Such matter may be of interest but much of it is not essential to this discussion. On the other hand, the wealth of detail on Abelard is helpful.

The author is keenly interested in the history of philosophy and human thought and so he has made a book which every student of the history of education would find valuable in determining the setting of education in the thought of the times. The book is rather for the instructor than for the immature student.

One misses in the book an annotated, though brief, bibliography of most serviceable books. One is limited to the footnote references, often to original authorities. The index, too, is lacking in detail. There is no mention of such institutions as the Cathedral Schools, nor of the Liberal Arts.

The chapter headings might be revised to indicate more accurately the contents of certain chapters Thus, the chapter on Charles the Great includes data of succeeding generations.

If the book is regarded as a history of thought, with incidental reference to educational principles and practices, it is of much value. The material selected is interesting, the style of presentation attractive. Every school of education library should have the book.—ARTHUR H. WILDE, Boston University School of Education.

Preface to Teaching. By *Henry W. Simon.* With a Foreword by *Abraham Flexner.* 98 pp. Oxford University Press. New York. 1938.

The author expresses himself cleverly, interestingly, in unacademic language. The general tone is that of an interested layman who has had some experience and has observed much. There is no attempt at systematic coverage, but many phases of teaching are given attention.

Part I tells what the job is. A teacher cannot be an evangelist for new social doctrines. He cannot reform the world and should not attempt it. But he can teach children how to think, and he can so teach any subject as to develop its cultural values. To perform these tasks successfully, the teacher must be a real scholar in at least one field or subject; he must be able to teach the subject to young children, and he must make his work the basis for personal growth. By taking proper precaution, he can keep alive, be more interesting from year to year and avoid being a "typical schoolmarm." There are a few words of wisdom on how to deal with parents.

Part II in four brief chapters, tells the teacher how to do it. He must make a good impression when he faces that first class; he must know how to make a subject interesting; he must avoid the "keep order" type of discipline; he must acquire the high discipline of learning.

The volume is refreshing, if not highly instructive. The author writes easily and with apparent enjoyment. We may expect other interesting volumes. Abraham Flexner, in a brief foreword, commends the non-technical style of the author, and urges a section on the value of humor in teaching, in case there is revision for a second edition. — G. M. WILSON, Boston University.

When You Buy. By *Trilling, Eberhart* and *Nicholas*. J. B. Lippincott Co. 1938.

This book is intended as a text for use in high schools or in the freshman classes of colleges, and is well adapted for the purpose.

It is clear, written in vigorous and interesting style, and is thoroughly practical. The problems are those of everyday life. The information is of value not only to young people but to adults as well. Indeed, the book would be of capital service for reference in the home, the school or public library. The bibliographies are well selected, the illustrations illuminating. It is a question if the cartoons add permanent interest to the book; they please at first and may be of special interest to young people, but we doubt if they are a real addition to the book—they make the purchaser grotesque in appearance and simple in intelligence. — ARTHUR H. WILDE, Boston University.

Cooperative Supervision in the Public Schools. By *Alonzo Myers, Louise M. Kifer, Ruth C. Merry,* and *Frances Foley.* Prentice-Hall, Inc., New York. 1938. 340 pages. $2.50.

This is a thorough and extremely up-to-date treatment of the problem of democratic supervision in the public schools. Professor Myers in his Preface points out that supervision, in kind and in amount, largely depends upon the qualifications of the teaching staff. He further indicates that a true profession very largely supervises itself, and that self-supervision imposed by a professional group upon itself is more effective than any other form of supervision. Says Dr. Myers: "In the development of public-school supervisory programs, teachers have not been treated as professional workers for the simple reason that until quite recently public-school teachers have not been professional workers." Supervision in the traditional form was then imposed from without. Since teachers as a group are no longer inexperienced, poorly educated, and inadequately a new type of supervision, cooperative and democratic in nature, must be evolved. It is the purpose of this book to point out a number of problems incident to the question of practical and effective supervision. The book has been written for classroom teachers as well as for school administrators and supervisors. The study is divided into five sections: (1) Frame of Reference: Education in a Democratic Society; (2) The Relationship Between Teacher Qualification and Supervision; (3) The Induction and Guidance of Beginning Teachers; (4) Professional Improvement of Teachers in Service; and (5) The Special Subjects in the Modern School.

Cooperative Supervision in the Public Schools ought to be on the bookshelf in every supervisor's office as well as in the professional library of every public-school teacher.—WILLIAM P. SEARS, JR., New York University.

NEW EDUCATIONAL BOOKS

We acknowledge receipt of the following publications of interest to the readers of EDUCATION. Mention here does not preclude review in this or subsequent numbers of EDUCATION.

Webster's Students' Dictionary for Upper School Levels. 1938. American Book Company. $2.48.

Man's Great Adventure. Revised by *Edwin W. Pahlow*, Professor of the Teaching of History, Ohio State University. With full color illustrations by *Fortunino Matania*. 1938. $2.20. Ginn & Company.

Senior English Activities. Book One. By *W. Wilbur Hatfield*, *E. E. Lewis*, *Emma M. S. Besig*, and *Gladys L. Borchers*. 1938. $1.40. American Book Company.

The Day Nursery. By *Ethel S. Beer*. With an Introduction by *Dr. Patty Smith Hill*. 1938. $1.60. E. P. Dutton & Co.

Beyond High School. By *Margaret E. Bennett*, Director of Guidance, Pasadena City Schools, and *Harold C. Hand*, Associate Professor of Education, Stanford University. 1938. $1.36. McGraw-Hill Book Company.

Where Are You Going to College? A Handbook Introduction to New England Colleges, 1938. College Handbook Series I. By *Roy H. Lane*, Secretary. M. H. Leavis, Publisher, 186 Massachusetts Ave., Boston. 75c postpaid.

Experience Units in Biology. By *J. Frank Faust*, Principal Chambersburg High School, Chambersburg, Pa., and *George R. Biecher*, Head Teacher of Biology, Chambersburg, Pa. 1938. $1.60 list. Stackpole Sons, Harrisburg, Pa.

Ah-Ming, a Boy in China. By *Grace Graham Keen*, Hong Kong. Illustrated by the author. 1938. 96c list. Stackpole Sons, Harrisburg, Pa.

The William Rainey Harper Memorial Conference. Edited by *Robert N. Montgomery*. 1938. $2.00. The University of Chicago Press.

Typewriting for Personal Use. By *E. G. Blackstone* and *C. T. Yerian*. Second Edition. 1937. $1.32. The Gregg Publishing Company.

Progressive Education at the Crossroads. By *Boyd H. Bode*, Ohio State University. 1938. Newson & Company.

Fundamentals of Educational Psychology. By *O. B. Douglas*, Ph.D., Associate Professor of Educational Psychology, University of Texas, and *B. F. Holland*, Ph.D., Assistant Professor of Educational Psychology, University of Texas. 1938. $2.50. The Macmillan Company.

The Founding of American Civilization: The Middle Colonies. By *Thomas Jefferson Wertenbaker*, Edwards Professor of American History, Princeton University. Illustrated. 1938. $3.00. Charles Scribner's Sons.

Modern-School Arithmetic. New Edition for Seventh Grade and Eighth Grade. By *John R. Clark*, *Arthur S. Otis*, *Caroline Hatton*, and *Raleigh Schorling*. 1938. World Book Co.

Zehn Ziehen Den Rhein Hinauf and Franzl Besucht Berlin. German Readers for Beginners. By *D. Jenner*. 50c each. 1938. Oxford University Press.

Modern Practices in the Elementary School. By *John A. Hockett*, Department of Education, University of California, Berkeley, California, and *E. W. Jacobsen*, Superintendent of Schools, Oakland, California. 1938. $2.60. Ginn & Company.

Elementary English Handbook II. By *R. W. Bardwell*, Supt. of Schools, Madison, Wisconsin, *Ethel Mabie*, formerly Director of Curriculum, Public Schools, Madison, and *J. C. Tressler*, Author. With drawings by *C. E. B. Bernard*. 1938. 80c. D. C. Heath & Company.